

IF YOU BUILD IT, THEY WILL .COM

Web Development & Troubleshooting

Chris Lowrance & Jiz Lee

#FPCon2 @ChrisLowrance & @JizLee

CRASHCOURSE

a pink & white production



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A Resource Guide by
Chris Lowrance
Jiz Lee

About Chris Lowrance

As a freelance designer and web developer, Chris Lowrance has worked with feminist luminaries including artist/journalist Molly Crabapple and sex worker activist podcaster Siouxie Q (WhoreCast.com). In 2009, he helped Pink & White Productions launch the original website HeavenlySpire.com, and later helped re-launch CrashPadSeries.com, integrating new technologies to help the site scale with its rising popularity. Chris was also part of the team that created PinkLabel.tv in 2012.

Now Web Manager at the veteran queer porn studio, Chris handles customer support, site maintenance, and further development projects to stay on top of evolving technologies.

@ChrisLowrance
ChrisLowrance.net

About Jiz Lee

Though most known as the adult industry's iconic genderqueer porn star, Jiz Lee has a longer history working behind the scenes. Since 2004, they have served as a web consultant and developer for artists, sex workers, non-profits and small businesses, and have spoken at conferences on tech for non-profits at Yerba Buena Center for the Arts. In 2007, Jiz was part of the development team that launched CrashPadSeries.com using open source software, and founded the erotic philanthropic paysite Karma Pervs, a feature of the Feminist Porn Awards' Best Website, JizLee.com.

As Online Marketing Director of Pink & White Productions, Jiz continues to work on both sides of the camera, using their wide range of web and online marketing expertise to help others excel in the industry, using the flexibility of accessible technologies to benefit queer, feminist means.

@JizLee
JizLee.com

Domain Registration

Don't register domain and buy hosting from same company. That way if one goes down the other does not.

Hosting

Shared Hosting: This is the super-cheap option. You get a folder and a share of the resources on a single server, along with several other customers.

Pros:

- Cheap! Usually \$5-\$20 a month.
- Easy! Very nearly everything about the server is out of your hands.

Cons:

- Very limited memory and bandwidth resources (often your site will be disabled if you exceed them, to protect the other clients on the server).
- If not, then there's a risk other clients will hog all the resources and cause problems for the other sites, or that you'll do the same to them.
- Extra security risks - if another client gets hacked, there's a chance this will compromise ALL sites on the server...
- Content restrictions are often stricter on shared hosting plans, mainly because porn sites are resource-intensive.
- Remember what we said about everything being out of your hands? That's also bad. You'll likely be unable to change some settings or install some software - or if you can you'll have to ask your host to do it for you.
- In general this is not a good option for serving video. For art, comics, and/or writing this can be an affordable option.

Virtual Private Servers (VPS): Somewhere between a shared plan and having your own server, a VPS means you are sharing a server (or servers) with other clients, but have your own personal install of all the server's software, as well as dedicated resources that are yours alone.

Pros:

- Can be cheaper than a Dedicated Server. Usually starting at around \$100 a month for resources comparable to a dedicated server.
- Can get more resources than shared hosting.

Cons:

- Limited resources and options compared to what a dedicated server can provide.
- A small but real chance another client's problem might affect the rest of the server, including you.
- You have just enough control to be dangerous, with access to settings that could cause serious problems if configured wrong.

Dedicated Servers: A dedicated server plan means there's a server somewhere that is all yours.

Pros:

- Power. A dedicated server is devoted entirely to delivering your site, and only your site. All resources are yours.
- Flexibility: You generally have access to edit any options and install any software you want.
- Security: Access is entirely in your hands, and you don't have to fear whether some other clients' problems will become your own.

Cons:

- Expensive. Most start at \$150ish a month and can go as high as \$1000 or more for the most powerful packages.
- You have more than enough control to be dangerous, with access to settings that could cause serious problems if configured wrong.

See the end of this document for a list of hosting providers we've confirmed are porn-friendly.

Why We Love Wordpress

Wordpress is a free, open source platform for web publishing. At its most basic, Wordpress is just a way to store sets of information (like a blog post) in a database, and then retrieve that info and display it to a viewer by inserting it into a template. Originally intended for blogging, it has evolved into a full-scale content management system (CMS) capable of powering any kind of website imaginable.

A progressive-download video player was recently integrated into Wordpress, making it perfect for a multimedia site. If you've ever published a blog, either on Wordpress.com (Wordpress's little sibling), Blogspot, or another service, you already know how to add content to a Wordpress-powered site.

The biggest advantage of Wordpress is the vast community of developers helping to expand its functionality through custom themes and plugins.

Themes originally just controlled what the site looked like, but many now integrate advanced features and customizable options. A huge amount are available for free, and many excellent ones are available for under \$100. Developers like Chris can even build them from scratch to your exact needs.

Plugins add even more functionality to Wordpress. Some do small things like add social media sharing buttons, and others can completely transform how a site works. Plugins are what allow you to hide content from non-members, have a shopping cart and checkout options, and more. Again, most are free, but some of the more powerful ones have premium versions with valuable additional options.

Building it

Let's assume we're building a basic membership site with streaming video, and also a section to sell signed DVDs.

1. **Get Wordpress:** The latest version of Wordpress can be downloaded from <http://wordpress.org>, where you'll also find the famous "5-minute Install" instructions (http://codex.wordpress.org/Installing_WordPress). However, many hosts offer a wizard for installing Wordpress that's even easier to use... or will even do it for you if you ask.
2. **Get a Theme:** If you choose an existing theme, think not only about what you want the site to look like, but how you want to organize the content, and what that content is. Be sure to read reviews and look for themes that are still supported by their developers.
3. **Members Only:** You'll need a way to offer sign-ups, manage memberships, and of course hide content from non-members. There are several plugins available for this, but Chris's favorite at the moment is s2Member. The free version offers a lot of functionality, but the \$90 Pro version will accept CCBill out-of-the-box, among other bonuses. The Getting Started documentation is very thorough and helpful.

Once installed and configured, a membership plugin like s2Member (<http://www.s2member.com/>) allows you to create a sign-up page (and take payments through your payment processor), control what level of member can see which pages or posts, and will even tell your payment processor when to rebill members, or deactivate their account if they cancel or fail to pay.

4. **Hard Goods:** There are also many plugins for running a web store that sells real or digital products via a shopping-cart system. Chris has the most experience with WooCommerce (<http://www.woothemes.com/woocommerce/>), which is free for the most basic version. With shipping rates, stock, and payment methods to consider, these plugins are even more complicated than membership management plugins, but most provide good documentation.

Once installed and configured, these allow visitors to view your products, add them to a cart, check out and pay via your payment processor, and will notify you of the order so you can fulfill it.

Payment Processors

PayPal, WePay, and Similar Services

DO NOT USE THESE SERVICES. THEY HAVE VERY REGRESSIVE AND OVERZEALOUS POLICIES AGAINST ADULT CONTENT AND SEXWORKERS. THEY WILL FREEZE YOUR ACCOUNT AND CAUSE YOU TO LOSE MONEY.

The Lesser Evils? “High Risk” Credit Card Processors

The reason those other processors are such jerks about porn can be traced back to the credit card companies themselves. Visa and Mastercard put us in the same category as gambling: “High Risk.” They then charge large up-front fees to accept payments for us. Most processors don’t want to deal with deciding who they need to collect this fee from and who they don’t, so they (overzealously) freeze and cancel the accounts of anyone related remotely to sex work.

Some companies capitalize on this by catering directly to “high risk” businesses. They collect the upfront fees required by credit card companies, then take their own high-percentage cut of payouts to you. To stay on the good side of the credit card companies, they enforce sometimes-strict rules about content (no blood, no weapons) and sometimes outright bans on certain words (like “non-consent” or “child,” regardless of context).

Terms:

Visa/Mastercard Fees: Yearly fee to the CC companies due to “high risk”

Starting Processing Rate: The amount of each payment kept by the processor. For most, this goes down the more money you bring in.

CCBill:

Visa/MS fees: \$1000/y US,
\$500/y EU

Starting Processing Rate:
14.5%

Reserve: 5%, 26 weeks

Weekly Minimum: None
<http://epoch.com>

EPOCH:

Visa/MS fees: \$1000/y US,
\$500/y EU

Starting Processing Rate:
15%

Reserve: None

Weekly Minimum: None
<http://epoch.com>

VEROTEL:

Setup fees: None

Visa/MS fees: \$1000/y US, \$500/y EU
Basic, same for Premium unless weekly
min. is kept.

Starting Processing Rate: 15.5% (Basic)
14% (Premium)

Reserve: 10%, 24-week

Weekly Minimum: None for Basic,
100EUR/w to avoid Visa/Mastercard
fee, 1000EUR a week to avoid additional
25EUR/w fee for Premium

<http://verotel.com>

Betting on the Dark Horse: Non-credit-card Alternatives

BITCOIN: Is a “crypto-currency” which is a fancy way of saying it is digital money, with its own dollar-to-bitcoin exchange rate. There are others, like Dogecoin, but Bitcoin was first and most popular.

UPSIDES: There are no banks or credit card companies involved to tell you what you’re allowed to collect bitcoins in exchange for. If you use Verotel, you can accept Bitcoin alongside credit cards.

DOWNSIDES: If you want to turn Bitcoins into the kind of money your landlord or grocery store will take, you’re at the mercy of fluctuating exchange rates. You’ll need to use a Bitcoin-to-dollar (or other currency) exchange like BitPay (<http://bitpay.com>). There is a lot of distrust of Bitcoin, due to shady circumstances around its funding and high-profile security failures as of late.

DWOLLA: <http://dwolla.com> Is a non-credit-card alternative payment system. Chris has spoken directly with the creator and with their customer service: “there is nothing specifically in our Terms and Conditions preventing your or other companies in your industry from using Dwolla.”

They do say they would “have to do some advanced due diligence” concerning what info they collected, but that’s no different than CCBill or any other processor.

UPSIDES: No credit cards means no credit card fees or restrictions. Dwolla’s fees are tiny - 25 cents from any transaction over \$10. So far they have been adult-content-friendly: MakeLoveNotPorn.com reports being treated very well.

DOWNSIDES: Currently only available to businesses and customers inside the U.S. Customers must have an account with Dwolla, which can take 2 days to activate. To accept instant payment you must be approved for a Credit account by Dwolla’s bank, and Dwolla couldn’t promise me the bank wouldn’t take issue with some content. Otherwise, payments take 2 days to clear (they are basically a bank transfer).

Resources and Further Reading:

Falsecatalyst’s “Reasons Why Paypal Sucks Balls...”

<http://falsecatalyst.tumblr.com/post/68739547470/reasons-why-paypal-sucks-balls-they-will-freeze-your>

Siouxie Q’s “Kicked Out: Crowdsourcing Shows Its Bias”

<http://www.sfweekly.com/2014-04-02/culture/whore-next-door-crowdsourcing-paypal/>

Pandora Blake’s “Sex and Censorship”

<http://pandorablake.com/blog/2014/03/sex-and-censorship/>

Maggie Mayhem’s “How Credit Card Companies are Ruining Porn:”

<http://mayhemmultimedia.com/meetthemayhems/how-credit-card-companies-are-ruining-porn/>

Miss Fiona’s “Sexworker Approved Payment Options”

<http://missfreudianslit.tumblr.com/post/73352410012/sex-work-approved-payment-options>

SECURITY: What's at risk?

User info: You want to protect your customers' data at all costs. Luckily, this is easy, because you shouldn't collect your customers' data! Sensitive info like addresses and payment info should be gathered and stored by your payment processor, not you. The only data you should be storing is username, password, and email.

Premium Content: People are going to try and get your content for free. They'll try to guess the URLs of your videos, images, and pay-walled content at the very least. Thankfully membership management solutions include ways of locking down content so it can only be viewed or downloaded by logged-in members. In addition, CDNs offer additional security options to restrict access to content stored on them.

Spam, Malware, and your SEO: Most likely, if your site is hacked, it will be by a robot that's just looking to inject SEO spam into your site. This will usually be hidden from you - only search engines can see it - and replaces all content with sketchy links to Viagra dealers and erotic Twilight fanfiction. In extreme cases, a script may be embedded on the site that will be downloaded onto the viewers' computer.

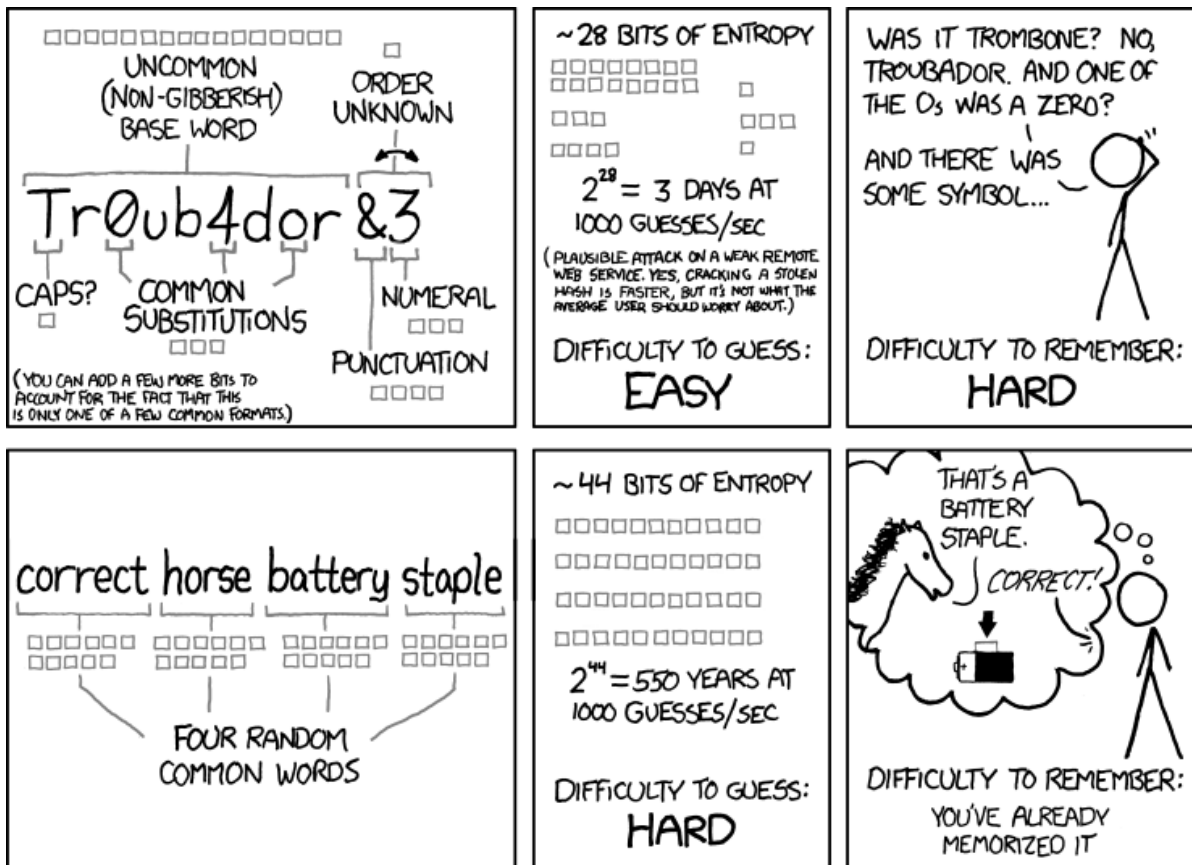
In both cases, Google will notice and "blacklist" your site. This will wreck traffic and SEO! Anyone Googling your site will be told not to go to it, and the major browsers will give "This site's been hacked!" warnings before letting anyone open your page. This can be fixed (more on that later), but it's best not to let it happen in the first place.

How To Protect It


Password Strength! The problem with passwords is, everyone is lying to you. Sites demand you use a number, a symbol, upper- and lowercase, but the first character can't be a number, and you can't use the same symbol twice, etc. etc. But rules just narrow down the possible combinations.

What matters more is length. Chances are, it's not a human being trying to guess your password, it's a computer. A computer can't tell the difference between "\$Dancing\$With\$Myself\$" and "8DDw97W0%kJIRRM32\$\$js." They will take it an equally long time to guess. But one of them is a hell of a lot easier for you to remember, making it less likely you'll change it to "monkey" out of frustration.

Comic By Randall Munroe <http://xkcd.com/936/>



THROUGH 20 YEARS OF EFFORT, WE'VE SUCCESSFULLY TRAINED EVERYONE TO USE PASSWORDS THAT ARE HARD FOR HUMANS TO REMEMBER, BUT EASY FOR COMPUTERS TO GUESS.



Another option is a password management solution, like Passpack or Lastpass. You store all your passwords with them, and then you only need to login to them to access any of your sites. They're super-secure; you use a passphrase like above, plus two-layer authentication. This allows you to use CRAZY passwords for everything else that you'd never be able to remember but would take millennia to guess.

Updates! A website is kind of like a car. You can't just buy it, take it out on the road, and expect it to run fine forever with no maintenance.

Wordpress gets a bad rap when it comes to security, but the truth is when exploits are found, they get patched fast. **But you must keep it up-to-date.** The same is true of plugins and, to a lesser extent, themes. This is also a good reason to be cautious of and limit the number of plugins you run.

Be Careful with Plugins and Themes: There are a lot of poorly written plugins out there that leave security holes. It's hard for a novice to spot these issues, so pay attention to the reviews. When in doubt, Google it!

Minimize Access: There should only be ONE admin account in Wordpress, and it shouldn't be "admin!" Change the name, and make sure the password is very good. If you have team members that add content to the site, but don't need to change settings or other admin options, create an "editor" account for them.

Permissions: Files on a web server use a permissions system, CHMOD (CHange MODe) that says who can read, run, or change them. This is represented as a three-digit number and can be edited in most FTP programs. Unless you are a developer, you're unlikely to need to mess with this ever. But just in case... NEVER, EVER CHANGE A FILE OR FOLDER SET TO "777" AND LEAVE IT THERE! "777" says anyone can do anything to the file... including the public. This is the equivalent of not only leaving your doors unlocked, but taking them off the hinges and stringing flashing lights around the gaping entryway.

Security Begins at Home: Install antivirus and antimalware on any devices you log into the site with. Keep them up-to-date. This is to prevent key-loggers and other malware from stealing access to your site by watching you log into it. Also, avoid accessing sensitive areas while on public Wi-Fi! The coffee's cheaper at home anyway.

Resources and Further Reading:

Wordpress.tv videos on security: <http://wordpress.tv/?s=security>

Passpack Password Manager: <https://www.passpack.com/>

LastPass Password Manager: <https://lastpass.com/>

Video Encoding and Mobile Readiness

There are two kinds of Streaming Video: “True” streaming and Progressive Download (or pseudo-streaming).

Progressive Download

- Easy to implement. Just requires a player and the video URL.
- Can support higher quality video
- Downside: Video must preload partially, and download faster than playback to avoid pausing.
- Downside: Over course of playback, entire video is downloaded and stored temporarily on the viewer’s device. This requires a lot of bandwidth and also makes pirating easier.
- Prominent Example: Vimeo

True Streaming:

- Only downloads what is viewed, not the whole file, less bandwidth and more difficulty to pirate.
- Any part of the video can be skipped to and viewed immediately.
- Only way Livestreaming is possible.
- Downside: Video will stutter if data-rate exceeds connection bandwidth. This can be avoided by using dynamic streaming, which requires multiple versions of the video at different qualities.
- Downside: Requires special software on the server, more complicated set-up, and different protocols for different devices. Best paired with a CDN.
- Prominent Example: Youtube as of 2012.

What does this mean for Mobile?

On a broadband connection or even 4G, Progressive looks and plays great. On slower connections like 3G, the download wait can be a nuisance.

Dynamic (variable bitrate) streaming is best for mobile. You encode several qualities of the same video, and the player uses the highest quality possible given the current stream.

Encoding: Some people pay a service to encode for them, others do it themselves. Here are absolute basics:

File type: Offering both a WEBM and an MP4 version is best. Your web player will deliver the one most compatible for the user’s browser or device, and between the two you’ll have all major browsers and devices covered. That said, you can get away with just MP4.

Handbrake: When you’re just starting out, and don’t have a lot of video to process at one time, HandBrake is a great free program for encoding MP4s.

Bare Bones Settings for Widest Support:

MP4 - H.264, Baseline Profile, Level 3.0, 1 Reference Frame, 640x480 max res. Look for a “Fast Start” option in your encoder.

Resources and Further Reading:

Handbrake: <http://http://handbrake.fr/>

Flowplayer Encoding Advice (basic): <http://flowplayer.org/docs/encoding.html>

Video on the Web (very advanced): <http://diveintohtml5.info/video.html>

Frequently Asked Queers: Customer Service Concerns

Customer service and support is an important, but often unexpected, part of running a pay site. Aside from inevitable human error on your part, there will always be issues outside your control that will affect a customer's ability to use the site, and special concerns when it comes to queer and feminist porn consumers. Here are some things to keep in mind.

1: Be on your customers' side.

It's easy to see customer support as adversarial, especially when customers are rude or demanding. Keep their perspective in mind, and remember times when you paid for something and encountered a problem with it. Most customers are carrying bad memories of prior encounters with customer service reps, and may not realize you're a small company (or just one person). Humanize yourself when you respond by using your name in the email signature rather than "Tech Support," apologize that they encountered a problem *even when you know it isn't your fault* and frame the situation as "you and me versus this problem."

2: Establish expectations.

On your contact page, give a timeframe for response, like "2 business days." Try to fulfill it, and apologize when you don't!

When you are aware of an issue (for instance, if you can't deliver video in an iPhone-friendly format) make this clear before sign-up!

3: Ask for detail.

Nothing is more frustrating than hearing "It won't play" with no other info. On your contact or support page, remind customers to give as much detail about their problem as possible, including exactly what they did and what happened, if any error messages appeared, and the browser and device they were using. Some contact form plugins will gather some of that data for you, or let you require certain fields.

When you do get uninformative error reports, politely ask for the details you need "so we can fix this for you." Frame everything as a step in the effort to help them.

4: Speaking of “It won’t play...”

Problems with playing a video will be the most common issue you hear. Often it won’t have anything to do with you or your site. Internet video is one of the most finicky technologies in existence. Here’s what I do when I get a playback error report:

1. Ask for detail if not provided.
2. Replicate the issue. Check the video, preferably with the same browser or device if you can.
3. If you CANNOT replicate the problem, chances are it’s not on your end. Tell the customer the video tests fine, and (if they haven’t) ask them to try viewing in a different browser. 90% of the time, if the user was in Chrome, it’ll play fine in Firefox, *or vice versa!*
4. If they have trouble in all browsers, it may be either the device (older mobile devices cannot play larger res. videos, for instance) or connection (a weak or low-quality signal most likely, or even a deliberate block by their ISP!). Apologize when it is clear the user will be unable to watch your videos. Refund at your discretion.
5. If you CAN replicate the problem, follow the same advice yourself - try different browsers, devices, and narrow down what has the problem and what doesn’t. Possible causes are too numerous to go into here, but notify the customer when you’ve solved it, or else let them know you’re working on it.

5: Wield the Ban Hammer Judiciously

Have a “Terms of Service” that explains your own expectations from customers, stating what behaviors will result in a revoked account (password-sharing, or abusive comments). Look to established sites for guidance.

When you catch a customer violating your TOS, judge on a case-by-case basis and consider a polite-but-firm warning. Often this will garner an apology and keep a paying customer. But don’t be afraid to cancel accounts if necessary.

Fixing a Hacked Site

1. Access the damage. Use Sucuri.net to scan your site - it will tell you what kind of malware or spam you have, and give you some idea of what files are infected. It will also tell you what search engines have blacklisted you.
2. Run anti-virus on your computer, to make sure there's not a keylogger on there undoing your work behind you.
3. If on shared hosting, let your host know so they can make sure the problem is isolated to your account.
4. Find and patch the hole! Change ALL passwords to EVERYTHING, and review all security (permissions, etc.). You need to block how they got in or it will happen again.
5. Clean the infection. Use the scan to see what files are afflicted. It might be in a plugin or theme if only a few are. If it's site-wide it could be Wordpress itself or the database. Delete and reinstall infected plugins and themes, reinstall Wordpress, and rescan. If the infection is still there, restore your site to a backup. Scan again, and go to an earlier backup if still infected. Rinse and repeat.
6. If malware was placed on the site, or you have reason to believe user accounts were compromised, notify customers right away. Encourage them to change their password.
7. If blacklisted, once the scans come back clean, submit your site to the search engine(s) for review. This varies by engine, but can be done by getting a Webmaster Tools account for Google.

Resources and Further Reading:

Wordpress Codex: http://codex.wordpress.org/FAQ_My_site_was_hacked

Sucuri Site Scan: <http://sitecheck3.sucuri.net>

Google Webmaster Tools: <https://www.google.com/webmasters/tools/>

Adult Friendly Services

HOSTING:

These hosts are confirmed to be okay with adult content:

Amerinoc - amerinoc.com

DreamHost - dreamhost.com

HostGator - hostgator.com

ASmallOrange - dreamhost.com

Naked Hosting - asmallorange.com

Gandi - gandi.net

NationalNet - nationalnet.com

YourHosting - yourhosting.nl

GoDaddy (we cannot recommend them in good conscious, though)

Popular Hosts that DO NOT allow adult content:

Laughing Squid

GreenGeeks

BlueHost

MediaTemple

Special thank you to:

RubyGoodNight - <http://rubygoodnight.com/adult-friendly-resources-sex-bloggers-adult-writers>

HeyEpiphora - <http://www.heyepiphora.com/buy-toys/#hosting>

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