



Torsten Liermann

Oct 29th at 8:03 AM

I would like to use the run:tiny image, but I need dejavu fonts. Is it now possible to add this to the image using buildpacks? (edited)



Daniel Mikusa

27 days ago

I don't think it would work on tiny. With base you can use the apt-buildpack and install additional packages, like fonts.



Torsten Liermann

27 days ago

Right, on base it works.



Daniel Mikusa

27 days ago

I don't know what all is required with the font but your options would be to bundle them with the app or make a one-off buildpack that manually installs them.



Daniel Mikusa

27 days ago

I would recommend seeing if your app can try to load the font file directly. Or if you can configure it to look for fonts in a place you control. Then you can ship the font with your app.



Torsten Liermann

27 days ago

For ubuntu I must do this: `RUN apt-get install fontconfig ttf-dejavu -y && apt-get clean`



Torsten Liermann

27 days ago

`fontconfig` is the big thing



Daniel Mikusa

27 days ago

You might see if your apps language can read the TTF files directly. You could extract them from that pkg and include them with the app.

I suspect with tiny you're going to get into a situation where trying to install those pulls in a bunch of other stuff too, because dependencies.



Daniel Mikusa

27 days ago

And you might end up with something not that not much smaller than base. There's only roughly a 80M difference in the two. (edited)



Daniel Mikusa

27 days ago

If you have to install the pkgs you have to basically check out the repo and rebuild the image. You can swap in a custom run image when you build, so besides having to build the image, it doesn't add a ton of overhead.



Torsten Liermann

27 days ago

The fonts are not the problem, but "fontconfig". Libraries are installed on top of this, which the Java Runtime accesses.



Torsten Liermann

27 days ago

I don't understand your last hint, probably because I still don't know enough about image build technology.



Daniel Mikusa

27 days ago

Are you sure? A colleague was asking me about this recently and I'm pretty sure he got fonts working with Java by setting an env variable to tell Java to not use system fonts and use the fonts he bundled



Daniel Mikusa

27 days ago

What's the specific error you're getting? Is it a missing library or missing font files?



Daniel Mikusa

27 days ago

And I assumed you're talking about Paketo tiny, is that right?



Torsten Liermann

27 days ago

I don't have the error message to hand at the moment. However, the message indicated that the graphical environment cannot be initialized. It was a simple null pointer exception. I was looking to see if there was an alternative to fontconfig in Java (like you mention with Environment or whatever), but I couldn't find anything. All hints

assume fontconfig.



Torsten Liermann

27 days ago

Yes, I am talking about run:tiny. Why do you ask? "distroless images" should be the goal for productive environments -- I think.



Daniel Mikusa

27 days ago

Just wanted to confirm, we're on the Buildpacks Slack so could be other options.



Daniel Mikusa

27 days ago

Ok, My first suggestion and it won't help short term would be to open an issue against paketo-buildpacks/java. Perhaps we can do something.



Daniel Mikusa

27 days ago

Second would be use Paketo base. It'll be easiest and not a ton more size to the image.



Torsten Liermann

27 days ago

I have dealt with the CNB Lifecycle and using it with Gitlab. If you mean paketo, you're probably talking about using the pack utilities, right? Or what exactly is paketo base? Isn't the goal of buildpacks to simplify the build process?



Daniel Mikusa

27 days ago

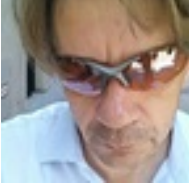
Tiny, base and full are just different stacks



Daniel Mikusa

27 days ago

So basically you just need to swap out the run image



Torsten Liermann

27 days ago

Yes.



Daniel Mikusa

27 days ago

You can also build your own run image from source, <https://github.com/paketo-buildpacks/bionic-tiny-stack>. I haven't done this in a while, but I believe you just run the create script there

paketo-buildpacks/bionic-tiny-stack

Tiny (minimal) stack for Ubuntu 18.04: Bionic Beaver

Stars

1

Language

Go

Added by GitHub



Torsten Liermann

27 days ago

Thanks for the tip. The solution of the mentioned colleague sounds better. Could you ask this colleague to publish the solution?



Daniel Mikusa

27 days ago

I see a number of references to, JAVA_FONT_S which I believe is what I suggested to my colleague. I'm not at that job anymore so I can't go back and look at the slack convo, unfortunately.

See <https://stackoverflow.com/questions/43276499/in-openjdk-how-do-i-set-font-dir-with-appendedfontpath-property/43352767#43352767>



Stack Overflow

In OpenJdk how do I set font dir with appendedfontpath property

I am trying to get my application to use fonts from a particular location in an OpenJdk installation using appendedfontpath property but it is not working for me. `../jre1.8.0_121+1/bin/java -`



Daniel Mikusa

27 days ago

There are a number of other references to that but I can't find any official oracle docs for it.



Daniel Mikusa

27 days ago

Maybe give it a try



Daniel Mikusa

27 days ago

If that works we can document it on the Paketo site



Torsten Liermann

27 days ago

Additional font directories can be configured, but everything requires "fontconfig".



Torsten Liermann

27 days ago

Thank you for your effort. The Oracle documentation for font configuration can be found here: <https://docs.oracle.com/en/java/javase/11/intl/font-configuration-files.html#GUID-48F5ADDD-FB48-461D-8F26-9805DFB783CD>



Torsten Liermann

27 days ago

These files from the font* packages need to be included in the tiny image - probably not all, but some.

```
/usr/share/fonts  
/etc/fonts  
/usr/bin/fc-  
/usr/lib/x86_64-linux-gnu/libfontconfig*  
/usr/lib/x86_64-linux-gnu/libfreetype*  
/usr/lib/x86_64-linux-gnu/libexpat*  
/lib/x86_64-linux-gnu/libexpat*  
/usr/lib/x86_64-linux-gnu/libpng16*  
/usr/share/appport  
/usr/share/lintian
```



Torsten Liermann

27 days ago

In my case, fonts are needed to create PDF documents. Other programming languages may not be dependent on the operating

system. Maybe there is also a solution for Java.