
Subject: Skylark reaching "beta" status, first 6 chapters of tutorial available..

Posted by [mirek](#) on Fri, 06 Jul 2012 15:13:09 GMT

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...here:

[http://www.ultimatepp.org/srcdoc\\$Skylark\\$Tutorial\\$en-us.html](http://www.ultimatepp.org/srcdoc$Skylark$Tutorial$en-us.html)

(more to come, I have yet to cover sessions, Ajax support and SQL).

I would also like to ask for help with "deployment" documentation - Skylark now works as console program that serves HTTP and SCGI requests. I guess the most common deployment would be to connect it to Apache through SCGI and use start-stop-daemon, provide some /etc/init.d script etc... I can do documentation about the issue, but I do not feel like am the most qualified to do so...

Mirek

Subject: Re: Skylark reaching "beta" status, first 6 chapters of tutorial available..

Posted by [dolik.rce](#) on Sun, 08 Jul 2012 13:50:17 GMT

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Hi Mirek,

Great work, the tutorials almost made me want to write a web-app

However, I found a little problem... Out of curiosity, I tried to run ab (Apache Benchmark) on Skylark based application, namely tutorial/Skylark04. It works great, but only sometimes. After a (variable) number of requests, the application fails with assert:Log:***** ASSERT FAILED: Assertion failed in /home/h/upp-production/uppsrc/Core/String.cpp, line 38
rc->refcount > 0

LastErrorMessage: No such file or directory

Backtrace:Upp::AssertFailed (file=0x83fdb2f "/home/h/upp-production/uppsrc/Core/String.cpp", line=38, cond=0x84016ea "rc->refcount > 0") at /home/h/upp-production/uppsrc/Core/Util.cpp:110
Upp::String0::LFree (this=0xb426bf18) at /home/h/upp-production/uppsrc/Core/String.cpp:38
Upp::String0::Free (this=0xb426bf18) at /home/h/upp-production/uppsrc/Core/String.h:226
Upp::String0::~~String0 (this=0xb426bf18) at /home/h/upp-production/uppsrc/Core/String.h:303
Upp::AString<Upp::String0>::~~AString (this=0xb426bf18) at /home/h/upp-production/uppsrc/Core/String.h:34
Upp::Moveable<Upp::String, Upp::AString<Upp::String0> >::~~Moveable (this=0xb426bf18) at /home/h/upp-production/uppsrc/Core/Topt.h:195
Upp::String::~~String (this=0xb426bf18) at /home/h/upp-production/uppsrc/Core/String.h:306
Upp::String::~~String (this=0xb426bf18) at /home/h/upp-production/uppsrc/Core/String.h:306
Upp::RawHtmlText::~~RawHtmlText (this=0xb426bf18) at

```
/home/h/upp-production/uppsrc/Skylark/Witz.h:14
Upp::RawHtmlText::~RawHtmlText (this=0xb426bf18) at
/home/h/upp-production/uppsrc/Skylark/Witz.h:14
Upp::RawValueRep<Upp::RawHtmlText>::~RawValueRep (this=0xb426bf10) at
/home/h/upp-production/uppsrc/Core/Value.hpp:70
Upp::RawValueRep<Upp::RawHtmlText>::~RawValueRep (this=0xb426bf10) at
/home/h/upp-production/uppsrc/Core/Value.hpp:70
Upp::RawValueRep<Upp::RawHtmlText>::~RawValueRep (this=0xb426bf10) at
/home/h/upp-production/uppsrc/Core/Value.hpp:70
Upp::Value::Void::Release (this=0xb426bf10) at /home/h/upp-production/uppsrc/Core/Value.h:85
Upp::Value::RefRelease (this=0xb626fa68) at /home/h/upp-production/uppsrc/Core/Value.cpp:25
Upp::Value::~Value (this=0xb626fa68) at /home/h/upp-production/uppsrc/Core/Value.h:239
Upp::Value::~Value (this=0xb626fa68) at /home/h/upp-production/uppsrc/Core/Value.h:239
Upp::Compiler::ExeBlock::Eval (this=0xb41a4ef0, x=...) at
/home/h/upp-production/uppsrc/Skylark/Exe.cpp:386
Upp::Render (exe=..., r=0xb62706a0, var=...) at
/home/h/upp-production/uppsrc/Skylark/Exe.cpp:395
Upp::Http::RenderResult (this=0xb62706a0, template_name=0x83fbfaa "Skylark04/index") at
/home/h/upp-production/uppsrc/Skylark/Http.cpp:290
HomePage (http=...) at /home/h/upp-production/tutorial/Skylark04/main.cpp:7
Upp::Http::Dispatch (this=0xb62706a0, socket=...) at
/home/h/upp-production/uppsrc/Skylark/Dispatch.cpp:327
Upp::SkylarkApp::RunThread (this=0xbffff3d8) at
/home/h/upp-production/uppsrc/Skylark/App.cpp:67
Upp::SkylarkApp::WorkThread (this=0xbffff3d8) at
/home/h/upp-production/uppsrc/Skylark/App.cpp:32
Upp::SkylarkApp::ThreadRun (this=0xbffff3d8) at
/home/h/upp-production/uppsrc/Skylark/App.cpp:37
Upp::CallbackMethodAction<Upp::SkylarkApp, void (Upp::SkylarkApp::*)()>::Execute
(this=0xb7fda7a0) at /home/h/upp-production/uppsrc/Core/Callback0.h:24
Upp::Callback::Execute (this=0xb7fd81b0) at /home/h/upp-production/uppsrc/Core/Callback.cpp:7
Upp::Callback::operator() (this=0xb7fd81b0) at /home/h/upp-production/uppsrc/Core/Cbgen.h:32
Upp::sThreadRoutine (arg=0xb7fd81b0) at /home/h/upp-production/uppsrc/Core/Mt.cpp:75
start_thread () from /lib/libpthread.so.0
clone () from /lib/libc.so.6
```

I guess there is some concurrency issue... To reproduce, you can run `ab -n 1000 -c 20 http://127.0.0.1:8001/myapp`.

And BTW: there is a lot of DLOGs and DDUMPs scattered in the skylark code, so it is not directly compilable in release mode

Best regards,
Honza

Subject: Re: Skylark reaching "beta" status, first 6 chapters of tutorial available..

Posted by [lectus](#) on Sun, 08 Jul 2012 15:48:06 GMT

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This is great Mirek!

U++ is now becoming more complete!

Is this already available in latest Nightly build for testing?

Subject: Re: Skylark reaching "beta" status, first 6 chapters of tutorial available..

Posted by [mirek](#) on Sun, 08 Jul 2012 18:59:54 GMT

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dolik.rce wrote on Sun, 08 July 2012 09:50Hi Mirek,

Great work, the tutorials almost made me want to write a web-app

However, I found a little problem... Out of curiosity, I tried to run ab (Apache Benchmark) on Skylark based application, namely tutorial/Skylark04. It works great, but only sometimes. After a (variable) number of requests, the application fails with assert:

Should be fixed, together with three other bugs revealed by 'ab'....

Now tested with one million ab requests without failing.

Also, DLOGs removed, it should be now possible to compile release mode.

Mirek

Subject: Re: Skylark reaching "beta" status, first 6 chapters of tutorial available..

Posted by [mirek](#) on Sun, 08 Jul 2012 19:01:09 GMT

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lectus wrote on Sun, 08 July 2012 11:48This is great Mirek!

U++ is now becoming more complete!

Is this already available in latest Nightly build for testing?

Hopefully this or next night (just added Skylark to the list of uppsrc production packages).

BTW, there are two more chapters in tutorial.

Mirek

Subject: Re: Skylark reaching "beta" status, first 6 chapters of tutorial available..
Posted by [zsolt](#) on Mon, 09 Jul 2012 14:03:40 GMT
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Thanks Mirek!
Very valuable work.

One note: isn't it a security hole to get session variables using `Http::operator[]`? I can imagine a situation where user posts something with the name of the session variable, modifying its value. It can be harmful if the user changes e.g. his/her user id in a web based system this way.

Subject: Re: Skylark reaching "beta" status, first 6 chapters of tutorial available..
Posted by [mirek](#) on Mon, 09 Jul 2012 17:28:46 GMT
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zsolt wrote on Mon, 09 July 2012 10:03Thanks Mirek!
Very valuable work.

One note: isn't it a security hole to get session variables using `Http::operator[]`? I can imagine a situation where user posts something with the name of the session variable, modifying its value. It can be harmful if the user changes e.g. his/her user id in a web based system this way.

You have got me thinking, but fortunately this is not the case:

HTTP request values are put into shared variable space first, then the session is loaded, overwriting the same variables with session values.

Means: what is set by `SessionSet` cannot be changed by HTTP request.

OK, one possible issue: User could provide some value before is is created in session and it could have been mistakingly considered a session value...

Mirek

Subject: Re: Skylark reaching "beta" status, first 6 chapters of tutorial available..
Posted by [zsolt](#) on Mon, 09 Jul 2012 17:43:58 GMT
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mirek wrote on Mon, 09 July 2012 19:28
OK, one possible issue: User could provide some value before is is created in session and it could have been mistakingly considered a session value...
Yes, this can be a real danger in a large project with a lot of programmers (many of them can be very sloppy).
Don't you think, it would be more safe to separate session and post variables at least based on some configuration option?

Subject: Re: Skylark reaching "beta" status, first 6 chapters of tutorial available..
Posted by [mirek](#) on Mon, 09 Jul 2012 18:42:28 GMT

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zsolt wrote on Mon, 09 July 2012 13:43mirek wrote on Mon, 09 July 2012 19:28

OK, one possible issue: User could provide some value before is is created in session and it could have been mistakenly considered a session value...

Yes, this can be a real danger in a large project with a lot of programmers (many of them can be very sloppy).

Don't you think, it would be more safe to separate session and post variables at least based on some configuration option?

Actually, I was a little bit afraid when introducing this "shared variable space", but decided to give it a try... anyway, I guess php \$_REQUEST discussion applies here too (yep, cookies go there as well so we have to take some measures. Even back when introducing the operator[], the option was to differentiate by first character of id.

So http[":var"] would be session, http["@var"] cookie and http["var"] either GET or POST (I guess not need to split those, as handlers react only to GET or POST, never both). GET and POST values with ':' and '@' at the start would be explicitly disallowed (and ignored).

The reason why not simply go with some Http::GetSession is that this way, some common processing is possible (e.g. Http::Int(const char *id)).

Do you see some catch in this remake?

Mirek

Subject: Re: Skylark reaching "beta" status, first 6 chapters of tutorial available..
Posted by [zsolt](#) on Mon, 09 Jul 2012 19:19:37 GMT

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It is not too beautiful, I think.

I did not learn the sources yet, but wouldn't be logical to put that operator[] and Int() functionalities into a separate class?

It could be the ancestor of Http class and the type of session and cookie members as well.

Subject: Re: Skylark reaching "beta" status, first 6 chapters of tutorial available..
Posted by [mirek](#) on Mon, 09 Jul 2012 19:44:41 GMT

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zsolt wrote on Mon, 09 July 2012 15:19It is not too beautiful, I think.

But it is not extremely ugly as well... At least you now have clear sign that you are dealing with

session / cookie. And IMO still less verbose than to write `http.Session("var")`.

Quote:

I did not learn the sources yet, but wouldn't be logical to put that `operator[]` and `Int()` functionalities into a separate class?

It could be the ancestor of `Http` class and the type of session and cookie members as well.

Maybe... but you also have to think about representation of these variables in witz templates. Sure, we can have `"cookie("var")"` and `"session("var")"` witz functions, but that further complicates the code and makes witz compiler optimizations a bit more difficult (not that there are many, but variable accesses are compiled to something like array index read).

Mirek

Subject: Re: Skylark reaching "beta" status, first 6 chapters of tutorial available..
Posted by [zsolt](#) on Mon, 09 Jul 2012 20:42:15 GMT

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OK, it seems to be reasonable to me. Prefixes should be OK.

BTW, I feel myself very inspired to rewrite our company homepage in C++

Subject: Re: Skylark reaching "beta" status, first 6 chapters of tutorial available..
Posted by [forlano](#) on Mon, 09 Jul 2012 21:08:05 GMT

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zsolt wrote on Mon, 09 July 2012 22:42: OK, it seems to be reasonable to me. Prefixes should be OK.

BTW, I feel myself very inspired to rewrite our company homepage in C++

And I too! I hope to see some CRUD facility.

Luigi

Subject: Re: Skylark reaching "beta" status, first 6 chapters of tutorial available..
Posted by [mirek](#) on Tue, 10 Jul 2012 20:08:52 GMT

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Session variables now start with '.', cookie variables with '@', Skylark07 is updated to reflect this...

Mirek

Subject: Re: Skylark reaching "beta" status, first 6 chapters of tutorial available..
Posted by [lectus](#) on Thu, 26 Jul 2012 20:38:26 GMT
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Just updated my U++ and tested the AddressBookWeb example on Linux and it works really well!

Congratulations and thanks to the U++ team!

Now I'll start playing with this web framework.

Subject: Re: Skylark reaching "beta" status, first 6 chapters of tutorial available..
Posted by [Alboni](#) on Wed, 10 Jul 2013 14:12:22 GMT
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What is skylark and what can you use it for?
Can't figure that one out

Subject: Re: Skylark reaching "beta" status, first 6 chapters of tutorial available..
Posted by [mirek](#) on Thu, 11 Jul 2013 05:52:51 GMT
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Alboni wrote on Wed, 10 July 2013 10:12What is skylark and what can you use it for?
Can't figure that one out

It is web framework - something you use to create website servers.

"Normally" you use PHP, CGI, Ruby, Jango.. Skylark is C++/U++ "competition" to these.