Subject: Error C2280 with MSC15 and Uniq
Posted by awksed on Wed, 16 Nov 2016 02:39:53 GMT
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I'm getting error C2280 (attempting to reference a deleted function) with MSC15 (pick() usually fixes most of these)
but there is a line in Uniq that is causing problems: PostCallback(callback1(WhenInstance, v));.

MSC15x64 compiler -Od switch

(no problem with MSC10x64)

Snippets:

```
class Uniq
{
 // callback called when another app instance is run
 //
 Callback1<Vector<String> const &> WhenInstance;
}

bool Uniq::SendCmdLine(void)
{
// ok, we're (finally...) connected to client
// just get command line from him

Vector<String> v;

int count = ScanInt(ReadFileString(pipe));

for(int i = 0; i < count; i++)
  v.Add(ReadFileString(pipe));

// This causes the following error:
// C:\upp\bazaar\Uniq\Windows.cpp(109): error C2280: 'Upp::Vector<Upp::String>::Vector(const
Upp::Vector<Upp::String> &)': attempting to reference a deleted function
//
PostCallback(callback1(WhenInstance, v));
```

Is there a compiler switch to stop generated functions from being deleted or what changes need to be made the the code?

Thanks,

Jan

Subject: Re: Error C2280 with MSC15 and Uniq
Posted by omari on Wed, 16 Nov 2016 13:10:11 GMT
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Hi,

a possible solution is tu use lambda instead of callback1 :

PostCallback([&](){WhenInstance(v);});

Subject: Re: Error C2280 with MSC15 and Uniq
Posted by awksed on Wed, 16 Nov 2016 14:50:06 GMT
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Hi omari,

Thank you for your reply.

Unfortunately PostCallback([&](){WhenInstance(v);}); results in:

error C2664: 'void Upp::PostCallback(Upp::Callback,void *)': cannot convert argument 1 from 'Upp::Uniq::SendCmdLine::<lambda_dc6ff32897304798432332 7a9646bad3 >' to 'Upp::Callback'
note: No user-defined-conversion operator available that can perform this conversion, or the operator cannot be called

Any ideas how to fix error C2664 (some cast perhaps)?

Thanks,

Jan

Subject: Re: Error C2280 with MSC15 and Uniq
Posted by mirek on Wed, 16 Nov 2016 22:25:15 GMT
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awksed wrote on Wed, 16 November 2016 03:39I'm getting error C2280 (attempting to reference a deleted function) with MSC15 (pick() usually fixes most of these)
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MSC15x64 compiler -Od switch

(no problem with MSC10x64)

Snippets:

```
class Uniq
{
 // callback called when another app instance is run
 //
 Callback1<Vector<String> const &> WhenInstance;
}
```

```
PostCallback(callback1(WhenInstance, v));
```

Trouble is using callback1 here... You are trying to 'deep copy' v (because it needs to become the part of callback value), but v does not have copy... (it is 'deleted').

To pass v into callback1, you need to use 'clone' or 'pick'. Which is a bit of trouble without C++14, but in C++14 you can use lambda with explicit copy specification like:

```
CONSOLE_APP_MAIN
{
 Event<const Vector<int>&> h = [](const Vector<int>& x) { DUMP(x); };

 Event<> ev;

 {
  Vector<int> x = { 1, 2 };
  ev = [=, x = pick(x)] { h(x); };
 }

 ev();
}
```

(this is in current trunk, upcoming 2016 release, but should work with Callback instead of Event too).

Alternatively, using

```
WithDeepCopy< Vector<String> > v;
```

would work too, with possible perfomance hit (if v is to be big)

Subject: Re: Error C2280 with MSC15 and Uniq
Posted by awksed on Thu, 17 Nov 2016 10:44:17 GMT
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Hi mirek,

WithDeepCopy< Vector<String> > v; allows bazaar/Uniq/Windows.cpp to compile.

Many thanks,

Jan