

How do I make a clone of a Windows Runtime vector in C++/CX?

devblogs.microsoft.com/oldnewthing/20191230-00

December 30, 2019



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There are still some people maintaining code bases written in C++/CX, even though C++/WinRT is the new hotness. Suppose you have a reference to a Windows Runtime vector in C++/CX, either an `IVector<T>^` or an `IVectorView<T>^`, and you want to clone it so that you can operate on the clone without affecting the original.

You could create a vector and copy the items across:

```
IVector<Thing^>^ original = GetTheThings();
Vector<Thing^> vec = ref new Vector<Thing^>();
for (auto&& thing : original)
{
    vec->Append(thing);
}
```

You can make the `Vector` run the loop by using the constructor overload that takes a pair of iterators.

```
IVector<Thing^>^ original = GetTheThings();
Vector<Thing^> vec = ref new Vector<Thing^>(begin(original), end(original));
```

Even more directly, you could slurp the entire collection into a `std::vector` and then move the `std::vector` into a new `Platform::Collections::Vector`.

```
IVector<Thing^>^ original = GetTheThings();
Vector<Thing^> vec = ref new Vector<Thing^>(to_vector(original));
```

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