```
size_t N = 1024;

// allocate Thrust container
device_vector<int> d_vec(N);

// extract raw pointer from
container

int raw_ptr = raw_pointer_cast(&d
_vec[0]);

// use raw_ptr in non Thrustfunctions

cudaMemset(raw_ptr, 0, N
sizeof(int));

// pass raw_ptr to a kernel
my_kernel<<<N / 128, 128>>>(N, raw
_ptr);

// memory is automatically freed
```

(a) Interfacing Thrust to CUDA

```
size_t N = 1024;

// raw pointer to device memory
int raw_ptr;
cudaMalloc(&raw_ptr, N sizeof(int));

// wrap raw pointer with a device_ptr
device_ptr<int> dev_ptr = device
_pointer_cast(raw_ptr);

// use device_ptr in Thrust algorithms
sort(dev_ptr, dev_ptr + N);

// access device memory through device
_ptr
dev_ptr[0] = 1;

// free memory
cudaFree(raw_ptr);
```

(b) Interfacing CUDA to Thrust