

# Exposing multiple device performance stats through MPI\_T

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Problem: multiple network devices on a server – want to return the number of sends on each device but don't want to create a new variable for each of them.

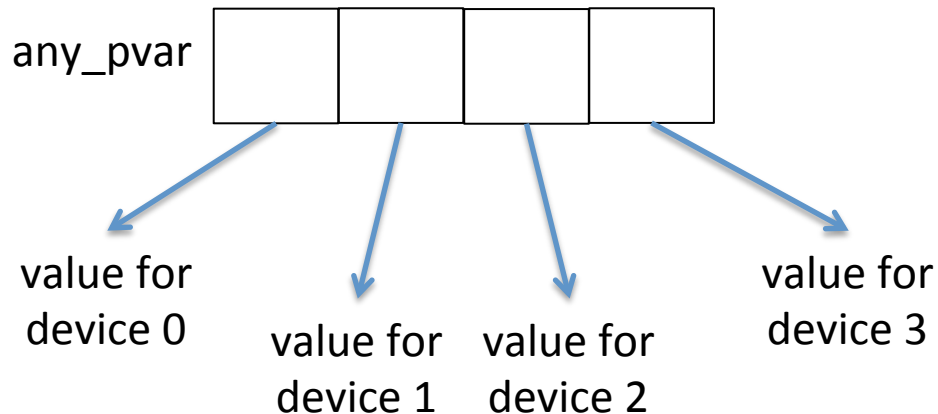
Solution: have each performance variable return an array of values; one for each underlying network device:

```
MPI_T_pvar_handle_alloc(session, pvar_index, NULL, &handle, &count);
```

count → will be the number of underlying network device

```
MPI_T_pvar_read(session, handle, buf);
```

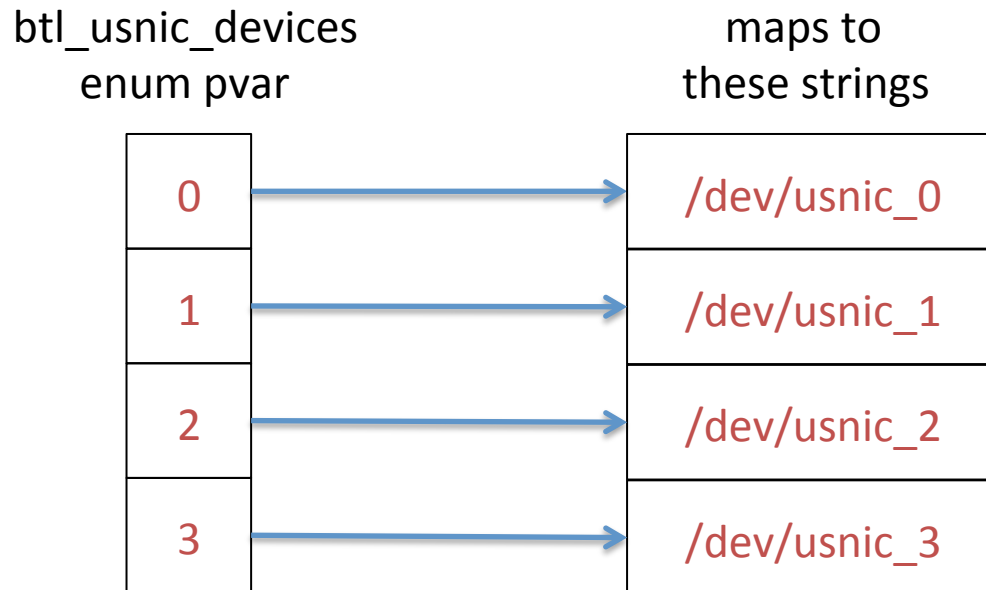
returns an array of count elements (e.g., 4):



Problem: But how do you know which array slot maps to which underlying Linux device?

Solution: the `btl_usnic_devices` state performance variable.

It has an `MPI_T` enumeration associated with it that indexes on the array indexes of each performance variable. In the previous example of 4 devices, we have array indexes of  $[0,N)$



Therefore...

