HPC Architectures

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Networks Exercise

This is a simple pen and paper exercise. Work out the values of the network parameters degree, diameter and bisection width for the following networks:

	degree	**diameter**	**bisection**
• a 64 processor ring	2	32	2
• a 64 processor 8×8 2-D torus	4	8	16
• a 64 processor hypercube	6	6	32
• a p processor ring	2	P%2	2
• an $m \times m \times m$ 3-D torus	6	3*m/2	2*(m^2)
• a d dimensional hypercube.	d	d	2^(d-1)