Cluster Management Data Structures

List:	**Data Structure chosen:**	**Justification:**	**Complexity of major operation:**
Machines	Array	Fixed Size. Low access complexity.	O(1) for access O(n) for searching
Event Pointers	Array	Low access complexity. Fixed Size.	O(n) for searching
System processes waiting list	Sorted Linked List	- remove the highest priority element in O(1) time Required access to all elements for comparing and search (Cannot use queues for this reason)	O(1) to remove the highest priority element. O(n) to insert process in the proper position.
Interactive processes waiting list	Linked List	Required access to all elements for comparing and search (Cannot use queues for this reason)	O(n) to insert process in the proper position.
Computationally intensive processes waiting list	Queue	Low complexity for insertion and deletion. We only need to insert elements at the back and remove from the front.	O(1) for insertion and deletion
In-execution Processes	Linked List	Low complexity for insertion and deletion. List changes size. Different types of processes.	O(1) for insertion and deletion

Completed Processes	Linked List	Low complexity for insertion and deletion. List gets bigger in size, so an array would be inefficient. Different types of processes.	O(1) for insertion and deletion