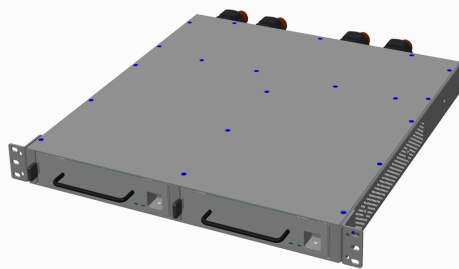
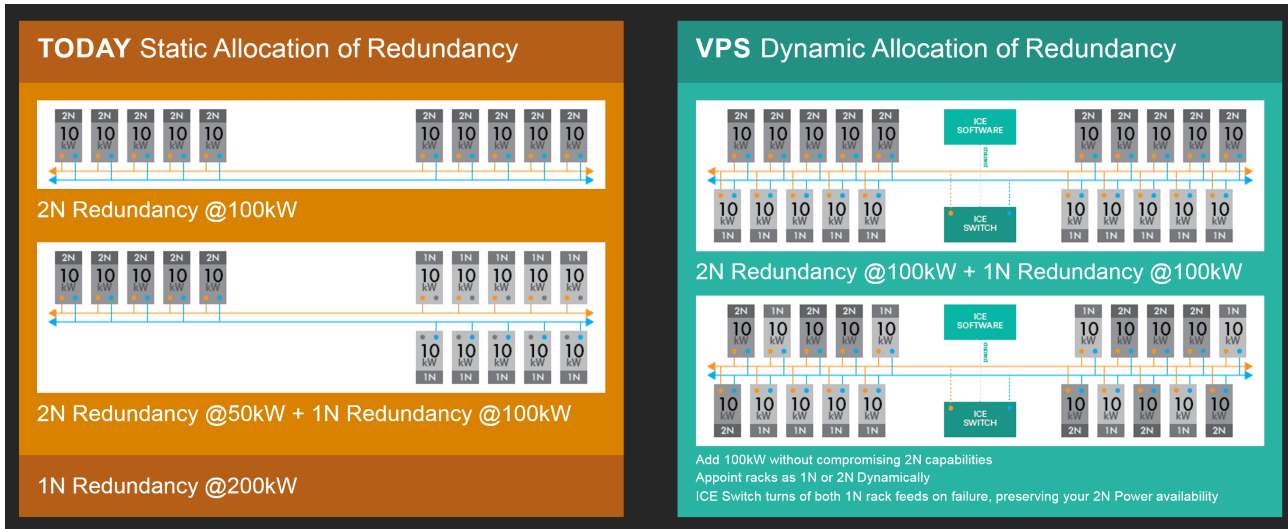


Tier 3,4 Data Centers are provisioned to be 2N redundant. As the image shows, it means that 50% of power is locked for redundancy. ICE Dynamic Redundancy allows Data Centers to use the stranded redundant power for less critical racks or workloads. Under failure condition the less critical racks or load is sacrificed to keep the High Availability SLA of Mission Critical 2N racks.

The figure below illustrates this concept with real life example of a 100kW + 100kW row. A Tier 3/4 2N environment can deploy 10 racks, of 10kW each, while keeping 100kW as redundant power. A Tier 1/2 Data Center would give up redundancy to deploy twice the number of 1N racks. In this figure, 5 X 2N racks are converted to 10 X 1N racks. ICE Dynamic Redundancy (Green figure to the right) allows all 10 X 2N Racks to be provisioned, with the addition of additional 10 1N racks. ICE further allows flexibility of converting any rack to 1N or 2N dynamically, as the redundancy is now managed by ICE S/W defined Power.



ICE SourceMix Software achieves Dynamic Redundancy through intelligent power switching. An elegant and scalable illustration (see figure left) uses a 1U Rack mountable intelligent ICE Switch. It stores the priority of the rack as a policy provisioned by ICE SourceMix.. In the rare event of power failure, ICE Switch shuts power off to less critical racks in order to preserve power for Mission Critical 2N racks, minimizing disruption by switching off as few workloads as possible based on actual power headroom then available.