What is claimed is:

1. A method comprising:

receiving one or more resource attributes for each of a plurality of physical computing resources, the plurality of physical computing resources including at least one graphics processing system, the graphics processing system having as resource attributes (i) a graphics processor variable clock speed and (ii) a variable graphics memory clock speed;

receiving a resource compute portion and a resource allocation for each of the plurality of physical computing resources over a period of time;

determining a single usage value for the plurality of physical computing resources over the period of time by:

calculating, using one or more processors, a utilization for each of the plurality of physical computing resources based at least on the one or more resource attributes of each respective physical computing resource of the plurality of physical computing resources;

generating, for each respective physical computing resource of the plurality of physical computing resources and based at least on the resource allocation and the resource compute portion of each respective physical computing resource, a conversion unit;

normalizing, for each respective physical computing resource of the plurality of physical computing resources and using at least a conversion unit associated with the respective physical computing resource, the utilization associated with the respective physical computing resource; and

summing the normalized utilizations for each of the plurality of physical computing resources to generate the single usage value representative of the plurality of physical computing resources over the period of time.

2. The method of claim 1, wherein the plurality of physical computing resources includes a plurality of disparate physical computing resources.

3. The method of claim 1, wherein the plurality of physical computing resources further comprises one or more of a field programmable gate array, an application-specific integrated

circuit, a system on chip, a digital signal processor, a microcontroller, or an adaptive compute acceleration platform.

4. The method of claim 1, wherein normalizing the utilization for each respective physical computing resource further comprises dividing the utilization for a respective physical computing resource by a conversion unit associated with that respective physical computing resource, the conversion unit being resource allocation divided by resource compute portion for that respective physical computing resource.

5. The method of claim 1, further comprising:

determining, for each available physical computing resource of the plurality of physical computing resources, one or more available resource attributes;

determining a single available resource value representative of a maximum of available resources in the plurality of physical computing resources over the period of time;

calculating, using the one or more processors, an availability utilization for each available physical computing resource of the plurality of physical computing resources based at least on the one or more available resource attributes;

normalizing, for each respective available physical computing resource and using at least the conversion unit associated with the respective available physical computing resource, the availability utilization associated with the respective available physical computing resource; and

summing the normalized availability utilization for each of the available physical computing resources to generate the single available resource value.

6. At least one computer readable storage medium having one or more instructions stored thereon, which, when executed by one or more processors, cause one or more operations to be carried out, the operations comprising:

receiving one or more resource attributes for each of a plurality of physical computing resources, the plurality of physical computing resources including at least one graphics processing system, the graphics processing system having as resource attributes (i) a graphics processor variable clock speed and (ii) a variable graphics memory clock speed;

receiving a resource compute portion and a resource allocation for each of the plurality of physical computing resources over a period of time;

determining a single usage value for the plurality of physical computing resources over the period of time by:

calculating, using the one or more processors, a utilization for each of the plurality of physical computing resources based at least on the one or more resource attributes of each respective physical computing resource of the plurality of physical computing resources;

generating, for each respective physical computing resource of the plurality of physical computing resources and based at least on the resource allocation and the resource compute portion of each respective physical computing resource, a conversion unit;

normalizing, for each respective physical computing resource of the plurality of physical computing resources and using at least a conversion unit associated with the respective physical computing resource, the utilization associated with the respective physical computing resource; and

summing the normalized utilization for each of the plurality of physical computing resources to generate the single usage value representative of the plurality of physical computing resources over the period of time.

7. The computer readable storage medium of claim 6, wherein the plurality of physical computing resources includes a plurality of disparate physical computing resources.

8. The computer readable storage medium of claim 6, wherein the plurality of physical computing resources further comprises**:** one or more of a field programmable gate array, an application-specific integrated circuit, a system on chip, a digital signal processor, a microcontroller, or an adaptive compute acceleration platform.

9. The computer readable storage medium of claim 6, wherein normalizing the utilization for each respective physical computing resource further comprises dividing the utilization for a respective physical computing resource by a conversion unit associated with that respective

physical computing resource, the conversion unit being resource allocation divided by resource compute portion for that respective physical computing resource.

10. The computer readable storage medium of claim 6, wherein the operations further comprise:

determining, for each available physical computing resource of the plurality of physical computing resources, one or more available resource attributes;

determining a single available resource value representative of a maximum of available resources in the plurality of physical computing resources over the period of time;

calculating, using the one or more processors, an availability utilization for each available physical computing resource of the plurality of physical computing resources based at least on the one or more available resource attributes;

normalizing, for each respective available physical computing resource and using at least the conversion unit associated with the respective available physical computing resource, the availability utilization associated with the respective available physical computing resource; and

summing the normalized of availability utilization for each the available physical computing resources to generate the single available resource value.

11. The computer readable storage medium of claim 6, wherein the operations further comprise determining one or more of a peak usage, a trough usage, or an average usage corresponding to each physical computing resource over the period of time.