Grid Site Availability Evaluation and Monitoring at CMS

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Site Evaluation (evaluated at the end of a day):

- CMS developed a sophisticated system for Run 1
- The WLCG SAM monitoring is used to test CE and SE functionality
- Hammer Cloud is used for sampling of realistic job execution on worker nodes
- PhEDEx transfer information is used to evaluate network performance
- A Site Readiness status is derived from the above three components

Usage Statuses (for the following day):

- Life Status determines if a site is part of the CMS computing grid
- Production Status determines if a site should execute production jobs
- CRAB Status determines if a site should execute analysis jobs

Future Improvements:

- Pilot Startup Site Test will check a worker node before jobs start
- The WLCG Computing Resource Information Catalogue will be used to store experiment specific site and service information
- Success and failure of user analysis and production jobs is being analyzed to detect site and service failures
- Metrics are being switched to finer time granularity