

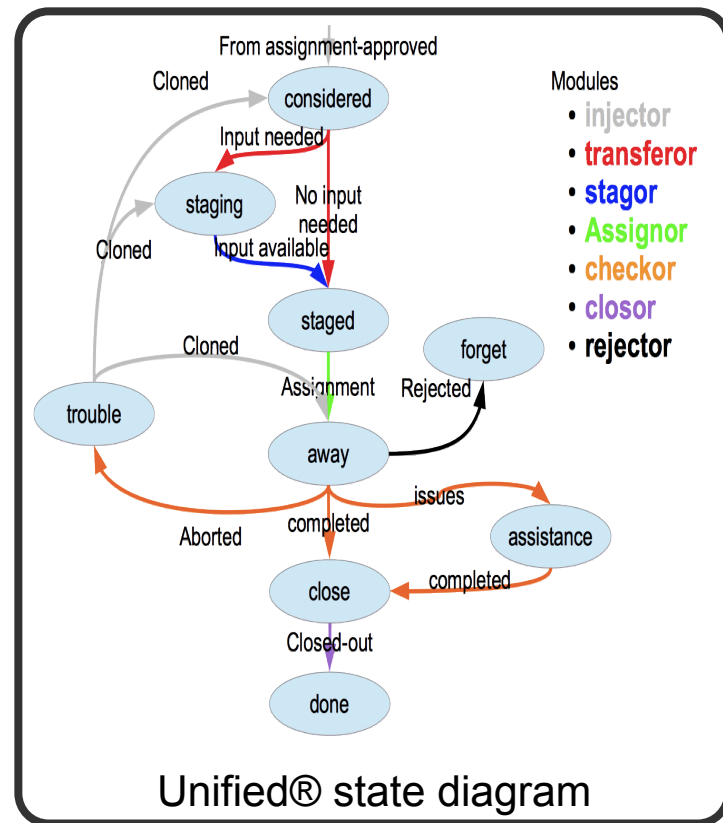


Software and Experience with Managing Workflows for the Computing Operation of the CMS Experiment



Flexible and dynamic system

- Handle production of **10s of Billions of MC/data events**
- Driving **200k cores** over heterogeneous computing centers
- Supervise **placement of input data** (primary, secondary)
- Utilize **as many resource as possible** over the grid
- **Spreads the load** to all possible sites
- **Integrates opportunistic resources** for processing
- **Dynamically re-route** work to reduce latencies
- **Automatically propagates** most workflows through production
- **Facilitates operation** on remedying issues
- **Notify users** of delays in delivery
- Ground for **even more automation**
- Towards **AI-assisted computing operation**



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