

Movement of MC Data using SAM & SRM Interface



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Overview

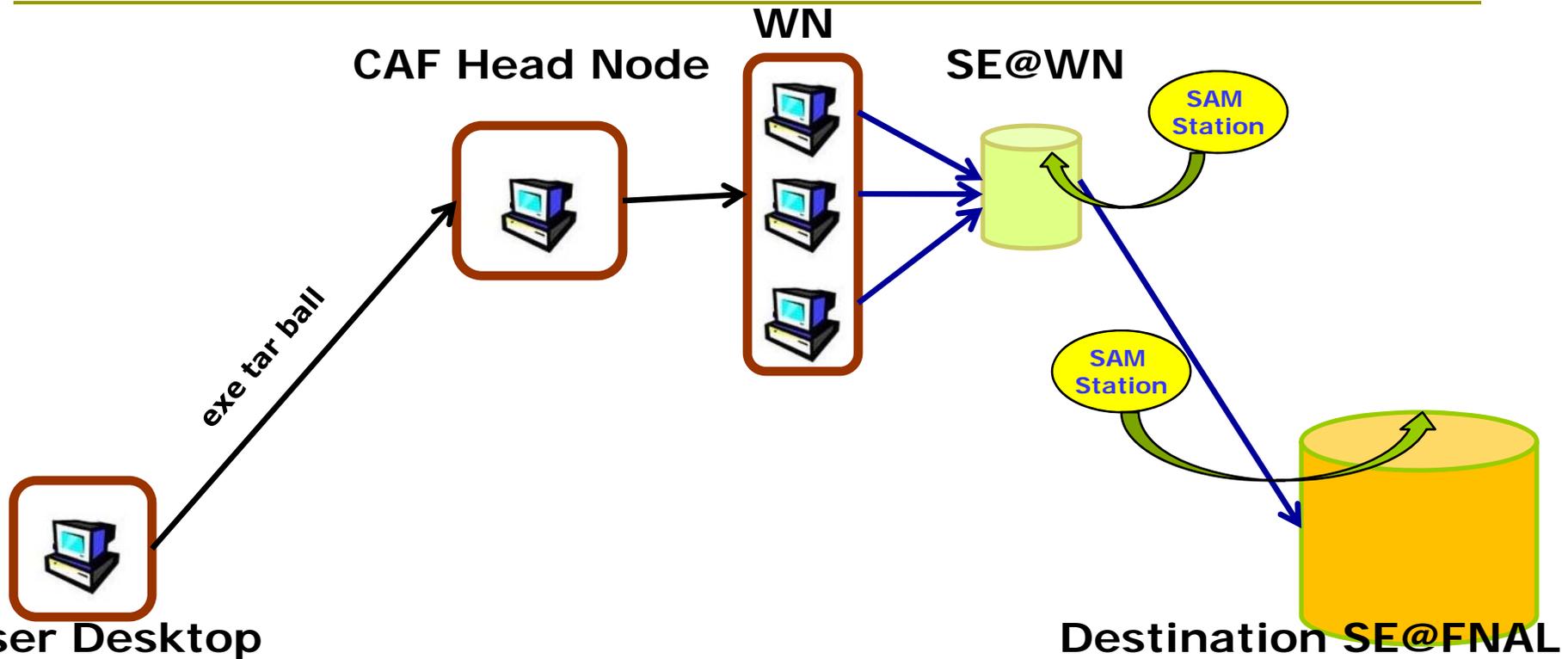
- ❖ **Motivation**
- ❖ **Proposed Model**
- ❖ **SRM Issues**

Motivation

- ❖ CDF has more than 3 fb^{-1} of raw data on tape.
- ❖ Need MC data for detector understand and physics analysis.
- ❖ CDF remote sites or grid Tier I & II sites can be utilized for producing MC data.
 - ❖ One of the major issues in the heavy usage of off site resources is that the Worker Nodes (WN) were sitting idle just because another WN was transferring output data to destination site at Fermilab.
 - ❖ Sometimes the output data from WN never arrived at destination sites.
- ❖ CDF rely on the concept of opportunistic uses of computing resources at remote sites. The above demerit in transferring output data from WN to remote sites should be discourgaed.
- ❖ For efficient utilization and greater share of computing resources at remotes sites

A robust framework is needed for output data transfer from WN to destination site at Fermilab.

Proposed Model

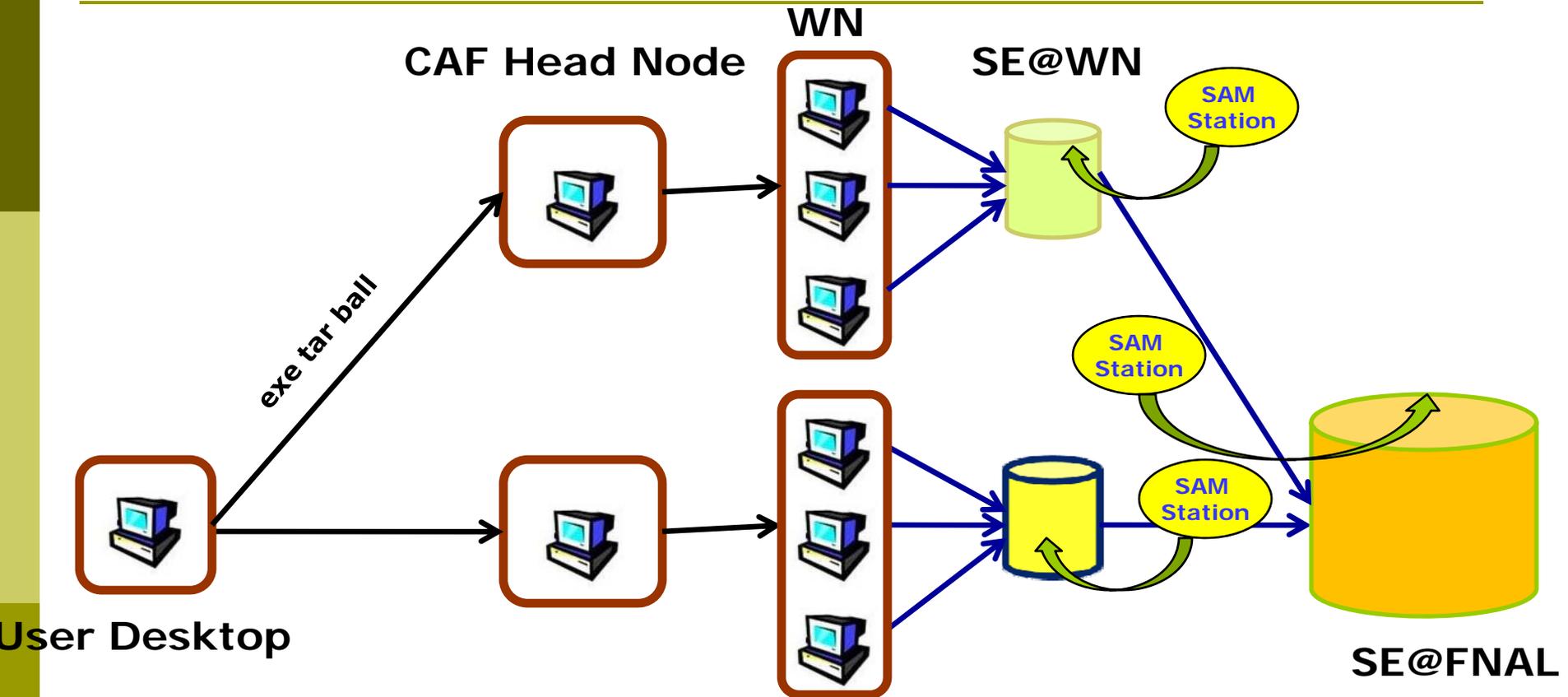


- ❖ Output data from Worker Nodes(WN) will be temporarily collected at the Storage Element(SE) closer to WN. Transfer or wait time for MC output data on WN will be considerably reduced due to large bandwidth between WN and its SE.

- ❖ Storage Elements will be attached to a SAM station.

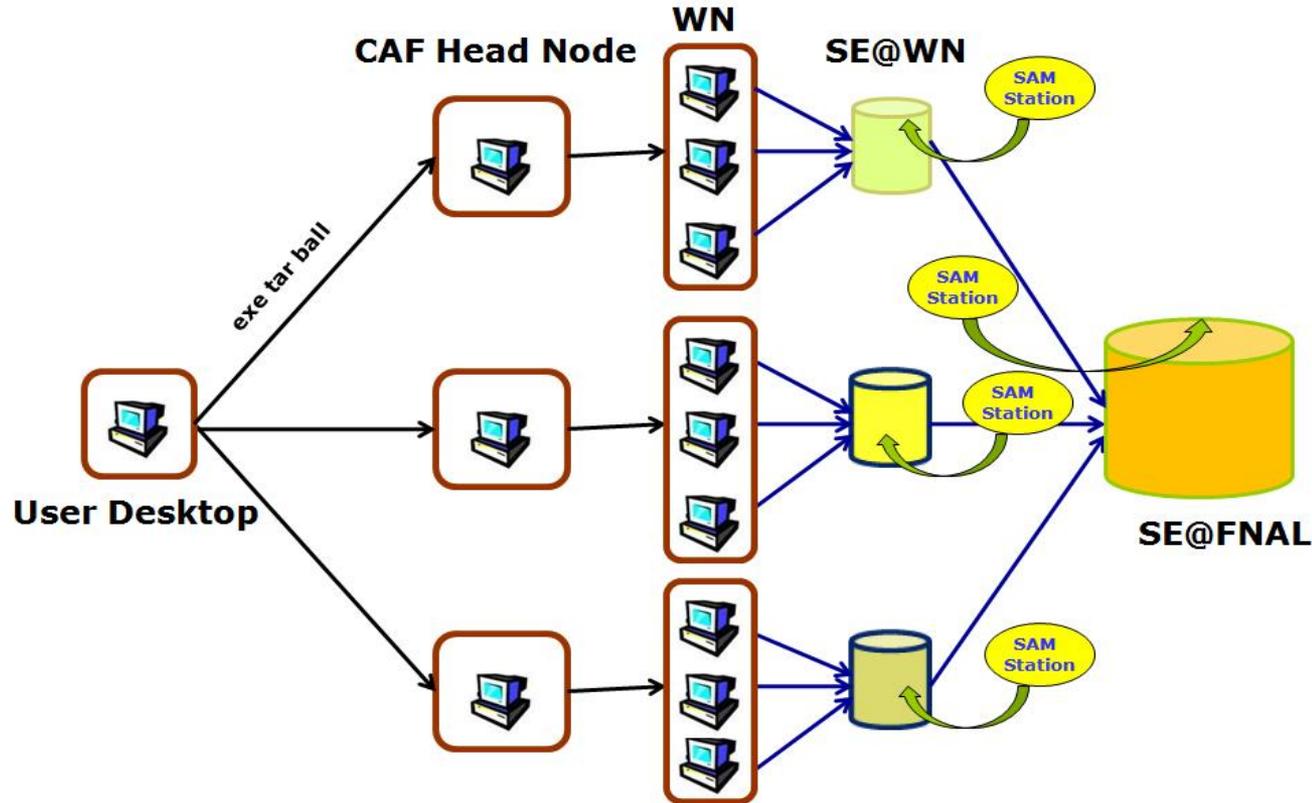
- ❖ Another process will initiate SAM station to station copy for transfer of files on SE@WN to destination SE at Fermilab.

Proposed Model



❖ Similarly, for other CAFs.

Proposed Model



- ❖ Different colors of Storage Element(SE) represent different flavors of Storage Resource Managers (SRMs) like, dCache, StoRM, BeStMan, etc.
- ❖ SAM data handling system will be used for MC data management.
- ❖ Proposed model will use the SAM-SRM interface for movement of MC₆ data from WN to destination SE at Fermilab.

SRM Issues

- ❖ SAM-SRM interface uses the SRM copy method for transfer of files between SRMs. The code for copy method has been ported from Fermi SRM client.
 - ❖ We found that SAM-SRM interface works if source and destination SRMs are of flavor dCache.
 - ❖ It is not working if source and destination SRMs are of different flavor, like dCache and BestMan.
- ❖ We would like the SAM-SRM interface should be supported with the flavors of SRM especially available on OSG and LCG.
- ❖ CDF is still using the UPS/UPD distribution tool for installation and management of its packages. Latest version of Fermi SRM client is available only in the RPM format.
 - ❖ Migration from UPS/UPD to RPM format just for a single package is challenging.

Acknowledgement !

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