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Canada

Summary of recent changes and plans for operational systems at the CMC

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Main change in 2017

HPC migration:

- new High-Performance Computing infrastructure, since Wed 06-Sep-2017 12UTC
- IBM P7 super-computer was replaced by a hybrid IBM-CRAY solution, consisting of a new main computing core of CRAY XC-40 machines, as well as a new pre- and post-processing and networking equipment
- new computing capacity is now at petaflop scale
- this upgrade will allow implementation of various projects in the near future (see next slide)



Planned changes (2018+)

Model component:

- coupled atmosphere-ocean-ice model in GDPS and GEPS
- increased horizontal and vertical resolution in various systems
- improved numerics of dynamical core
- revised parametrizations of moist processes
- new surface scheme
- revised calculation of ancillary fields

Analysis/DA component:

- various improvements in the treatment of conventional data (radiosondes, aircraft, AMVs)
- new surface data assimilation (CALDAS)
- improved SST and sea-ice analyses

