



ACCESSING CANADIAN ENSEMBLE DATA

8TH NCEP ENSEMBLE USER WORKSHOP - COLLEGE PARK – AUGUST 29, 2019

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Environment and Climate Change Canada



Canada 

HOW TO ACCESS CMC ENSEMBLE DATA?

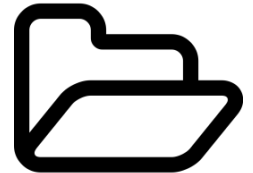


- **CMC GEPS & REPS members available internally for NCEP users**
 - **CMC GEPS members are available on NOMADS**
 - **These CMC ensemble datasets are only the Canadian contribution to NAEFS**
 - **Not all ensemble products are available from these locations**
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MSC DATAMART: OPEN DATA SERVER

Free and Open access for specialized users


























<https://dd.weather.gc.ca/>



- **HTTP/S flat file repository** for automated collection of MSC weather bulk data
 - **Not a web server !**
 - **Open data:** freely available to everyone to use and republish as they wish, on the main condition of attribution of the original data to Environment and Climate Change Canada
 - **Open formats:** published specifications that can be used by anyone: GRIB2, XML, netCDF, csv, ascii, Shapefile, etc
 - Designed for direct, automated (batch) downloading of data via HTTP protocol, supports AMQP « just-in-time pull » notifications and data retrievals
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- Service is anonymous

MSC DATAMART: OVERVIEW

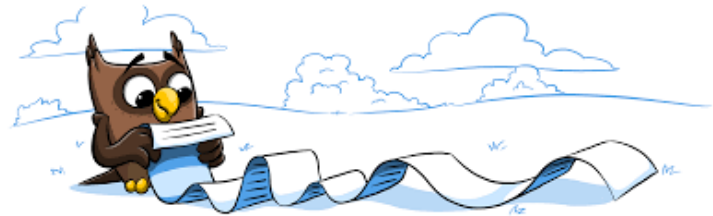
- **Over 2.5TB of fresh data freely available daily** (doubled in four years!)
- **Each data set has an operational support 24/7 and bilingual documentation** (the data provider is in charge of the user documentation, the metadata and updating them)
- **Discovery metadata** (essential to geospatial databases) – Government of Canada [open data portal](#) . *In progress...*
- **The data are distributed with the [ECCC Server End-use Licence](#)**. Allows data to be used for any purpose, including derived products, commercial or not. Public applications require attribution of original data to ECCC.

	about_dd_apropos.txt	2018-03-16 13:09
	air_quality/	2012-01-05 21:15
	alerts/	2012-07-26 14:34
	analysis/	2012-01-05 21:15
	barometry/	2012-01-05 21:15
	bulletins/	2018-04-26 18:53
	citypage_weather/	2018-04-26 18:53
	climate/	2018-11-28 14:28
	doc/	2018-11-29 16:41
	ensemble/	2018-09-26 13:50
	hydrometric/	2014-12-17 14:05
	marine_weather/	2012-01-05 21:15
	meteocode/	2016-09-06 17:09
	model_gem_global/	2015-02-05 14:57
	model_gem_regional/	2016-11-24 15:18
	model_giops/	2016-03-09 18:56
	model_hrdps/	2016-11-24 15:18
	model_riops/	2018-10-01 17:37
	model_wave/	2018-02-13 15:37
	nowcasting/	2012-01-16 20:32
	observations/	2012-09-26 14:02
	public-keyring/	2018-04-26 18:53
	radar/	2014-12-17 14:07
	trajectoires/	2018-04-26 18:53
	vertical_profile/	2012-01-05 21:15

NEW MSC OPEN DATA DOCUMENTATION

Version 2.0: <https://eccc-msc.github.io/open-data>

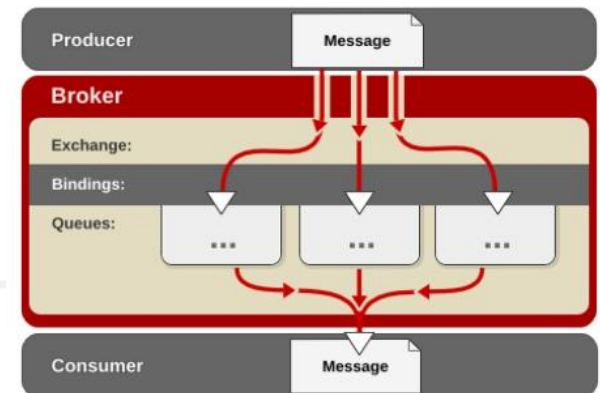
- **Whole list of available [MSC open data](#)** , including links to **products** available on canada.ca and weather.gc.ca, technical notes for NWP and descriptions of current versions of these systems, when available
- **Overview of [data usage](#), visualization and download methods**
- **[Data and products access](#) and detailed **technical documentation** on [MSC GeoMet](#) web services**
- A lot more!



Will be improved and completed over time in an incremental manner to meet the needs of our growing number of users

MSC OPEN DATA ACCESS

- MSC Datamart is a “pull” service. In order to avoid excessive repeated requests to the server, users are highly encouraged to access data through the "[Advanced Message Queuing Protocol](#)" (AMQP), open protocol with free libraries in numerous programming languages
- Enables the user not only to **be notified of available products** as they're published, but also to **receive them automatically**.
- **May be configured by the user to apply to a specific set of files** (weather warnings, observations, model data, etc.) and thus may concern only those products of interest to the user.
- Users requiring one-time data retrieval may use [wget](#).



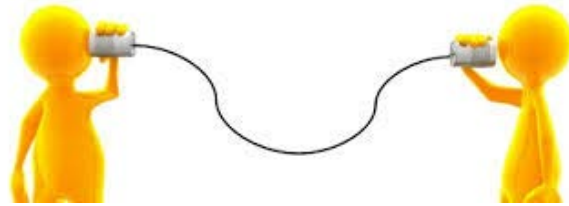
ENSEMBLE DATA ON DATAMART

- GEPS
 - raw members (Also available on NCEP & NOMADS)
 - Epsgrams XML (NAEFS)
 - probabilistic products
 - tropical cyclone track (coming soon)
 - REPS
 - raw members (Also available on NCEP)
 - probabilistic products
 - tropical cyclone track (coming soon)
 - CanSIPS (Seasonal forecasts)
 - raw members (Forecast + Hindcast)
 - products (coming soon)
-

ENSEMBLE DATA ON DATAMART (PLANNED FOR NEXT YEAR)

- Storm surge ensemble
 - Regional
 - Wave ensemble
 - Global (also in NAEFS)
 - Regional
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HOW DO WE INTERACT WITH USERS ?



- Contact point for external users for all questions about MSC weather data : ec.dps-client.ec@canada.ca
 - Notify to users any issues and upcoming changes in the MSC Datamart content through the [dd info mailing list](#). Level of service for user queries and announcements is regular business hours
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THANK YOU !

Special thanks to
Sandrine Edouard.



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