2-WMS : How to access

IGN offers two types of image services (WMS): a raster WMS service and another vector WMS service. Each delivers geolocated images according to the syntax of the WMS 1.3.0 protocol. Those delivered by the first are calculated from the image data of the IGN; those issued by the second come from the vector databases of the IGN.

The following tables contain the list of resources served by each of these services: name of the resource presented during the contract and technical name corresponding to use according to the context of use (GIS or Web use).

Detailed documentation: https://geoservices.ign.fr/documentation/donnees-ressources-wms-geoportail.html

Resources available as WMS (Raster) accessible through : http://wxs.ign.fr/KEY/geoportail/r/wms

A subset of WMS services:

Nom de la ressource	Nom technique
WMS-Raster-Géoportail – BD PARCELLAIRE®	CADASTRALPARCELS.PARCELS
WMS-Raster-Géoportail – Cartes	GEOGRAPHICALGRIDSYSTEMS.MAPS
WMS-Raster-Géoportail – Carte des pentes pour l'agriculture (BCAE)	GEOGRAPHICALGRIDSYSTEMS.SLOPES.PAC
WMS-Raster-Géoportail – Carte forestière v1 (1987–2004)	LANDCOVER.FORESTINVENTORY.V1
WMS-Raster-Géoportail – Carte forestière (v2 : 2006–)	LANDCOVER.FORESTINVENTORY.V2
WMS-Raster-Géoportail – Estompage	ELEVATION.ELEVATIONGRIDCOVERAGE.SHADOW
WMS-Raster-Géoportail – MNT BDAlti V1	ELEVATION.ELEVATIONGRIDCOVERAGE
WMS-Raster-Géoportail – MNT SRTM3	ELEVATION.ELEVATIONGRIDCOVERAGE.SRTM3
WMS-Raster-Géoportail – MNT RGEALTI	ELEVATION.ELEVATIONGRIDCOVERAGE.HIGHRES
WMS-Raster-Géoportail – Seuils de pente pour l'agriculture	ELEVATION.ELEVATIONGRIDCOVERAGE.THRESHOLD
WMS-Raster-Géoportail – Modèle numérique de surface	ELEVATION.ELEVATIONGRIDCOVERAGE.HIGHRES.MNS
WMS-Raster-Géoportail – Estompage appliqué au Modèle Numérique de Surface	ELEVATION.ELEVATIONGRIDCOVERAGE.HIGHRES.MNS.SHADOW

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Resources available as WMS (Vector) accessible through : http://wxs.ign.fr/KEY/geoportail/v/wms
A subset of WMS services :

Nom de la ressource	Nom technique
WMS-Raster-Géoportail – Admin EXPRESS	ADMINISTRATIVEUNITS.BOUNDARIES.EXPRESS
WMS-Vecteur-Géoportail – BD CARTO® – Administratif	BDCARTO-ADMINISTRATIF_FXX_RGF93G
WMS-Vecteur-Géoportail – BD CARTO® – Equipement	BDCARTO-EQUIPEMENT_FXX_RGF93G
WMS-Vecteur-Géoportail – BD CARTO® – Habillage	BDCARTO-HABILLAGE_FXX_RGF93G
WMS-Vecteur-Géoportail – BD CARTO® – Hydrographie	BDCARTO-HYDROGRAPHIE_FXX_RGF93G
WMS-Vecteur-Géoportail – BD CARTO® – Réseau ferré	BDCARTO-RESEAU_FERRE_FXX_RGF93G
WMS-Vecteur-Géoportail – BD CARTO® – Réseau routier	BDCARTO-RESEAU_ROUTIER_FXX_RGF93G
WMS-Vecteur-Géoportail – BD CARTO® – Toponymie	BDCARTO-TOPONYMIE_FXX_RGF93G
WMS-Vecteur-Géoportail – BD PARCELLAIRE®	BDPARCELLAIRE-VECTEUR_WLD_BDD_WGS84G
WMS-Vecteur-Géoportail – BD PARCELLAIRE® Communes	CADASTRALPARCELS.COMMUNES
WMS-Vecteur-Géoportail – BD PARCELLAIRE® Sections cadastrales	CADASTRALPARCELS.SECTIONS
WMS-Vecteur-Géoportail – BD TOPO Limites administratives 2011	BDTOPOMILLESIMEE-LIMITES-ADM-2011_SYMBO_BDD_WLD_WGS84G_20170313
WMS-Vecteur-Géoportail – BD TOPO Limites administratives 2012	BDTOPOMILLESIMEE-LIMITES-ADM-2012_SYMBO_BDD_WLD_WGS84G_20170313
WMS-Vecteur-Géoportail – BD TOPO Limites administratives 2013	BDTOPOMILLESIMEE-LIMITES-ADM-2013_SYMBO_BDD_WLD_WGS84G_20170313
WMS-Vecteur-Géoportail – BD TOPO Limites administratives 2014	BDTOPOMILLESIMEE-LIMITES-ADM-2014_SYMBO_BDD_WLD_WGS84G_20170313
WMS-Vecteur-Géoportail – BD TOPO Limites administratives 2015	BDTOPOMILLESIMEE-LIMITES-ADM-2015_SYMBO_BDD_WLD_WGS84G_20170313
WMS-Vecteur-Géoportail – BD TOPO Limites administratives 2016	BDTOPOMILLESIMEE-LIMITES-ADM-2016_SYMBO_BDD_WLD_WGS84G_20170313

Possible queries :

Geoportal WMS servers respond to the following three types of WMS requests:

- **GetCapabilities:** Returns the service parameters and the layers (a WMS layer is a resource) that are available with the information to set the following queries;
- **GetMap:** returns an image of the map;
- **GetFeatureInfo:** Returns information about the objects used to generate the map (optional).The GetFeatureInfo feature is not supported by all resources. This is indicated layer-by-layer in the response document to the GetCapabilities query.

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Available settings :

The parameters that can be used depend on the submitted query
(GetCapabilities, GetMap, GetFeatureInfo). They may be common or specific, mandatory or optional. The main parameters used are the following (non-exhaustive list):

Common parameters
- SERVICE: the type of service (here "WMS")
- VERSION: the version of the service used (1.1.1, 1.3 ...)
- REQUEST: the request to the server (GetCapabilities, GetMap or GetFeatureInfo)
- NB: the Geoportal WMS services support versions 1.1.1 and 1.3.0 of the WMS protocol.

GetMap specific settings

FORMAT: the output format - type-mime - of the image file ("image / png", "image / jpg", ...);
LAYERS: the resource (s) to use to calculate the image. It is the technical name of the resource that is used;
STYLES: the rendering style of the layers;
WIDTH: width of the final image in pixels;
HEIGHT: height of the final image in pixels;
In WMS 1.0 WMS 1.1 and WMS 1.2, the parameter SRS (Spatial Reference System) and in WMS 1.3 the parameter is renamed CRS. This parameter indicates the coordinate system used;
BBOX (Bounding Box): the geographic footprint of the data to be rendered in the image.
DPI: expected image density in "dot per inch" or "pixel per inch" (default: 90.7 DPI).

GetFeatureInfo specific parameters

A GetFeatureInfo request contains parameters for creating an image and adds the following parameters indicating a point in the image and the format to use to return the response.
I: abscissa of a point in the image in pixels
J: ordinate of a point in the image in pixels
QUERY_LAYERS: The resource (s) whose information you want to retrieve. It is the technical name of the resource that is used;
INFO_FORMAT: the output format - type-mime - of the GetFeatureInfo request (ex: text / plain, text / html, ...)

Formats :

JPEG / PNG / TIFF / GeoTIFF
For WMS (Vector), those formats can be available: GIF / SVG / KML
Max Size of Image can be 2048 * 2048 (WIDTH / HEIGHT)

Projection:

WMS Services can be served in several coordinate system. The info is stored in the response of the GetCapabilities request.

Eg: https://wxs.ign.fr/pratique/geoportail/r/wms?SERVICE=WMS&REQUEST=GetCapabilities