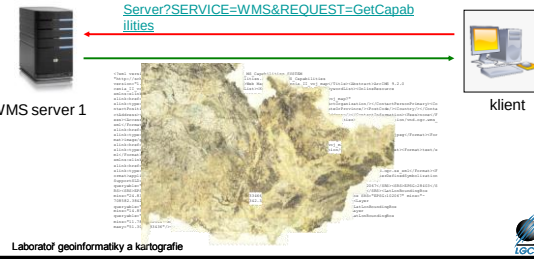
# GETCAPABILITIES METADATA

## Schéma služby WMS

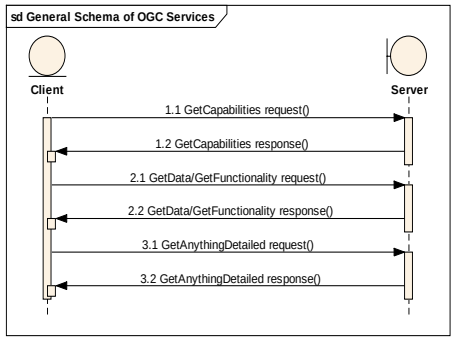
http://geoportal.cenia.cz/wmsconnector/com.esri.wms.Esrimap/ceu_II_voj_map?SERVICE=WMS&version=1.1.1&REQUEST=GetMap&Layers=1&srs=epsg:4326&BBOX=14.859209,48.533901,19.037995,50.577886&WIDTH=800&HEIGHT=600&FORMAT=image/png&TRANSPARENT=TRUE

http://geoportal.gov.cz/ArcGIS/services/CENIA/cenia_rt_II_vojenske_mapovani/mapserver/WMSServer?SERVICE=WMS&REQUEST=GetCapabilities






## OGC služby – request/response mechanismus






## Základní principy – *GetCapabilities* požadavek

- *GetCapabilities* = strojově (a lidsky) čitelná metadata obsahu OGC služby
- Obsahují číslo verze protokolu a musí odpovídat XML DTD nebo schématu definovanému pro danou verzi
- Odezva se liší na základě verze služby (výchozí verze)
- Obvykle jsou vyžadovány parametry:
  - *REQUEST* (REQUEST=GetCapabilities)
  - *SERVICE*
  - *VERSION* (volitelně)
  - *FORMAT* (volitelně)



## Základní principy – *GetCapabilities* odezva


```
<?xml version="1.0" encoding="UTF-8"?><!DOCTYPE WMT_MS_Capabilities SYSTEM
"http://schemas.opengis.net/wms/1.1.1/WMS_MS_Capabilities.dtd"><WMT_MS_Capabilities
version="1.1.1"><Service><Name>OGC:WMS</Name><Title>Web Map Service cenia_II_voj_map</Title><Abstract>ArcIMS
9.2.0 cenia_II_voj_map Web Map
Service</Abstract><KeywordList><Keyword>ArcIMS</Keyword></KeywordList><OnlineResource
xmlns:xlink="http://www.w3.org/1999/xlink"
xlink:href="http://geoportal.cenia.cz:80/wmsconnector/com.esri.wms.Esrimap/cenia_II_voj_map?"
xlink:type="simple"/><ContactInformation><ContactPersonPrimary><ContactPerson/><ContactOrganization/></Contact
PersonPrimary><ContactPosition/><ContactAddress><AddressType>postal</AddressType><Address/><City/><StateOrProv
ince/><PostCode/><Country/></ContactAddress><ContactVoiceTelephone/><ContactFacsimileTelephone/><ContactElectr
onicMailAddress/></ContactInformation><Fees>none</Fees><AccessConstraints>none</AccessConstraints></Service><C
apability><Request><GetCapabilities><Format>application/vnd.ogc.wms_xml</Format><DCPType><HTTP><Get><OnlineRes
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xlink:type="simple"/></Get></HTTP></DCPType></GetCapabilities><GetMap><Format>image/png</Format><Format>image/
jpeg</Format><Format>image/gif</Format><DCPType><HTTP><Get><OnlineResource
xmlns:xlink="http://www.w3.org/1999/xlink"
xlink:href="http://geoportal.cenia.cz:80/wmsconnector/com.esri.wms.Esrimap/cenia_II_voj_map?"
xlink:type="simple"/></Get></HTTP></DCPType></GetMap><GetFeatureInfo><Format>application/vnd.ogc.wms_xml</Form
at><Format>text/xml</Format><Format>text/html</Format><Format>text/plain</Format><DCPType><HTTP><Get><OnlineRe
source xmlns:xlink="http://www.w3.org/1999/xlink"
xlink:href="http://geoportal.cenia.cz:80/wmsconnector/com.esri.wms.Esrimap/cenia_II_voj_map?"
xlink:type="simple"/></Get></HTTP></DCPType></GetFeatureInfo></Request><Exception><Format>application/vnd.ogc.
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xception><UserDefinedSymbolization SupportSLD="1" UserLayer="0" UserStyle="1" RemoteWFS="0"/><Layer
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G:3035</SRS><LatLonBoundingBox minx="24.833319978" miny="59.757591838" maxx="24.833346688"
maxy="59.757605237"/><BoundingBox SRS="EPSG:102067" minx="-708582.384227693" miny="-1221876.90043478" maxx="-
425342.384227693" maxy="-1022492.90043478"/><Layer queryable="0"><Name>1</Name><Title>II. vojenske mapovani -
Moravav</Title><SRS>EPSG:4326</SRS><LatLonBoundingBox minx="14.859209037" miny="48.539805168"
maxx="19.037994924" maxy="50.577885723"5"/></Layer><Layer queryable="0"><Name>0</Name><Title>II. vojenske
mapovani - Cechy</Title><SRS>EPSG:4326</SRS><LatLonBoundingBox minx="11.7888412544" miny="48.287063427
maxx="17.1530089058" maxy="51.3094183436"/></Layer></Layer></Capability></WMT_MS_Capabilities>
```




## Základní principy – *GetCapabilities* odezva

- Obvykle XML dokument obsahující metadata formátovaná podle XML schématu daného OGC specifikací:
  - definice povinných a volitelných částí
  - formátování obsahu
- Jmenný prostor (namespace) podle OGC specifikace
  - např. *http://www.opengis.net/wms*
- Elementy *<name>* a *<title>*
  - *<name>* textový řetězec pro strojovou komunikaci
  - *<title>* „lidsky“ čitelné označení

## Struktura *GetCapabilities* odezvy

- První část začíná elementem <*Service*>
  - obecná metadata o serveru jako celku
  - musí obsahovat Name, Title, Online Resource URL
    - volitelně pak Abstract, Keyword List, Contact Information, Fees, Access Constraints, další specifické vlastnosti (jako např. limity počtu vrstev či výsledné velikosti map u WMS aj.)
- Druhá část začíná elementem <*Capability*>
  - operace podporované serverem, výstupní formáty pro tyto operace, URL prefix pro každou operaci
    - Z DCP je podporováno pouze HTTP



## Základní principy – *GetCapabilities* odezva


```
<?xml version="1.0" encoding="UTF-8"?><!DOCTYPE WMT_MS_Capabilities SYSTEM
"http://schemas.opengis.net/wms/1.1.1/WMS_MS_Capabilities.dtd"><WMT_MS_Capabilities version="1.1.1">
<Service><Name>OGC:WMS</Name><Title>Web Map Service cenia_II_voj_map</Title><Abstract>ArcIMS 9.2.0
cenia_II_voj_map Web Map Service</Abstract><KeywordList><Keyword>ArcIMS</Keyword></KeywordList><OnlineResource
xmlns:xlink="http://www.w3.org/1999/xlink"
xlink:href="http://geoportal.cenia.cz:80/wmsconnector/com.esri.wms.Esrimap/cenia_II_voj_map?"
xlink:type="simple"/><ContactInformation><ContactPersonPrimary><ContactPerson/><ContactOrganization/></Contact
PersonPrimary><ContactPosition/><ContactAddress><AddressType>postal</AddressType><Address/><City/><StateOrProv
ince/><PostCode/><Country/></ContactAddress><ContactVoiceTelephone/><ContactFacsimileTelephone/><ContactElectr
onicMailAddress/></ContactInformation><Fees>none</Fees><AccessConstraints>none</AccessConstraints></Service>
<Capability><Request><GetCapabilities><Format>application/vnd.ogc.wms_xml</Format><DCPType><HTTP><Get><OnlineR
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xlink:href="http://geoportal.cenia.cz:80/wmsconnector/com.esri.wms.Esrimap/cenia_II_voj_map?"
xlink:type="simple"/></Get></HTTP></DCPType></GetCapabilities><GetMap><Format>image/png</Format><Format>image/
jpeg</Format><Format>image/gif</Format><DCPType><HTTP><Get><OnlineResource
xmlns:xlink="http://www.w3.org/1999/xlink"
xlink:href="http://geoportal.cenia.cz:80/wmsconnector/com.esri.wms.Esrimap/cenia_II_voj_map?"
xlink:type="simple"/></Get></HTTP></DCPType></GetMap><GetFeatureInfo><Format>application/vnd.ogc.wms_xml</Form
at><Format>text/xml</Format><Format>text/html</Format><Format>text/plain</Format><DCPType><HTTP><Get><OnlineRe
source xmlns:xlink="http://www.w3.org/1999/xlink"
xlink:href="http://geoportal.cenia.cz:80/wmsconnector/com.esri.wms.Esrimap/cenia_II_voj_map?"
xlink:type="simple"/></Get></HTTP></DCPType></GetFeatureInfo></Request><Exception><Format>application/vnd.ogc.
se_xml</Format><Format>application/vnd.ogc.se_inimage</Format><Format>application/vnd.ogc.se_blank</Format></E
xception><UserDefinedSymbolization SupportSLD="1" UserLayer="0" UserStyle="1" RemoteWFS="0"/><Layer
noSubsets="0" opaque="0"
queryable="0"><Title>cenia_II_voj_map</Title><SRS>EPSG:4326</SRS><SRS>EPSG:102067</SRS><SRS>EPSG:102067</SRS><
SRS>EPSG:28403</SRS><SRS>EPSG:32633</SRS><SRS>EPSG:4326</SRS><SRS>EPSG:31287</SRS><SRS>EPSG:4269</SRS><SRS>EPS
G:3035</SRS><LatLonBoundingBox minx="24.833319978 6" miny="59.7575918838" maxx="24.833346688"
maxy="59.7576056237"/><BoundingBox SRS="EPSG:102067" minx="-708582.384227693" miny="-1221876.90043478" maxx="-
425342.384227693" maxy="-1022492.90043478"/><Layer queryable="0"><Name>1</Name><Title>II. vojenske mapovani -
Morava</Title><SRS>EPSG:4326</SRS><LatLonBoundingBox minx="14.8592093037" miny="48.5339005168"
maxx="19.037994924" maxy="50.5778857235"/></Layer><Layer queryable="0"><Name>0</Name><Title>II. vojenske
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maxx="17.1530089058" maxy="51.3094183436"/></Layer></Layer></Capability>
</WMT_MS_Capabilities>
```




## Struktura *GetCapabilities* odezvy

- Obsah element <*Capability*> se odlišuje OGC specifikace od OGC specifikace
- Ukázky pro jednotlivé OGC služby
  - viz cvičení