现在restfulwhois把整个查询处理逻辑糅合在一起，包括参数处理（查询类型提取/参数提取/参数转换/异常参数判断等）、查询逻辑、权限控制、返回值处理。升级和维护很困难。调整为如下：

**Filters**

EncodeFilter

RateLimitsFilter: decline rate limits. Todo：Local map -> remote cache

ErrorFilter: handle wrong query type

**RequestParser**

Parse request to:

queryType:domain/entity/nameserver/ip/as/event/ds/key

queryString

isFuzzyQuery

format

Validate queryString by query type

**SearchEngine**

*IndexUpdater:TODO*

*Domain core data: from dnr domain and rir domain*

*Entity core data: from dnr entity and rir entity*

*Ns core data: from nameserver*

**QueryEngine**

Query everything from cache (except ip/as), cache init after app startup.

Cache structure:

Cache value format: map of entity and all join entities

Cache key and value content:

domain\_handle\_{domain handle} : get domain by handle

domain\_ldhName\_{domain ldhName} : get domain by name

entity\_handle\_{entity ldhName} : get all kinds of entity by handle

registrar\_name\_{registrar name} : get registrar by name

variants\_handle\_{ variants handle} : get variants by handle

secureDns\_handle\_{securedns handle} : get secureDns by handle

dnskey\_handle\_{dnskey handle} : get dnskey by handle

ds\_handle\_{ds handle} : get ds by handle

notice\_handle\_{notice handle} : get notice by handle

remark\_handle\_{notice handle} : get remark by handle

**ip and as** *: range query, query from db*

**error** *: now is query from db by error code -> cache in local memory*

**PermissionController**

Remove unAuthed objects and columns from full result

**ResponseWriter**

Write response according to format

**TODO：**

**PermissionController**

**Dynamic Column Manager**