draft-harrison-regext-rdap-rir-search-00

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What is this about?

- New functionality:
  - Define searches by handle and by name for both IP ranges and ASNs
  - Define a new link relation that can be used to get the more-specific objects for a given IP range, ASN range, or domain
  - Document how reverse search can be used for IP addresses and ASNs
- By implementing this functionality, an RIR RDAP service operator will reach feature parity with existing RIR Whois services
  - RDAP becomes a complete alternative to Whois

IP/ASN search by handle/name

/ips?handle=…

/ips?name=…

```
{ "ipSearchResults":
  [ { "handle": "…",
      "startAddress": "…",
      … },
    … ] }
```

/autnum?handle=…

/autnum?name=…

```
{ "autnumSearchResults":
  [ { "handle": "…",
      "startAutnum": "…",
      … },
    … ] }
```

Link relations for more-specifics

```
{ "handle": "…",
  "startAddress": "192.0.2.0",
  "endAddress": "192.0.2.255",
  "links": [ {
    "rel": "down",
    "href": "…/192.0.2.0/24"
  } ] }
```

```
{ "ipSearchResults":
  [ { "startAddress": "192.0.2.0",
      "endAddress": "192.0.2.7",
      … },
    { "startAddress": "192.0.2.16",
      "endAddress": "192.0.2.31",
      … },
    … ] }
```

Why link relations for more-specifics?

- Simpler interface
  - Less chance for things to go wrong or for clients to make incorrect inferences about what is happening
- More flexibility on the server side with respect to implementation
  - Can implement as in-band search operation, or can pregenerate result sets

Next steps

- Request adoption
- Get input from subregional registries
- Consider extension identifier/prefix issue
- More implementations