

DCCP Service Codes

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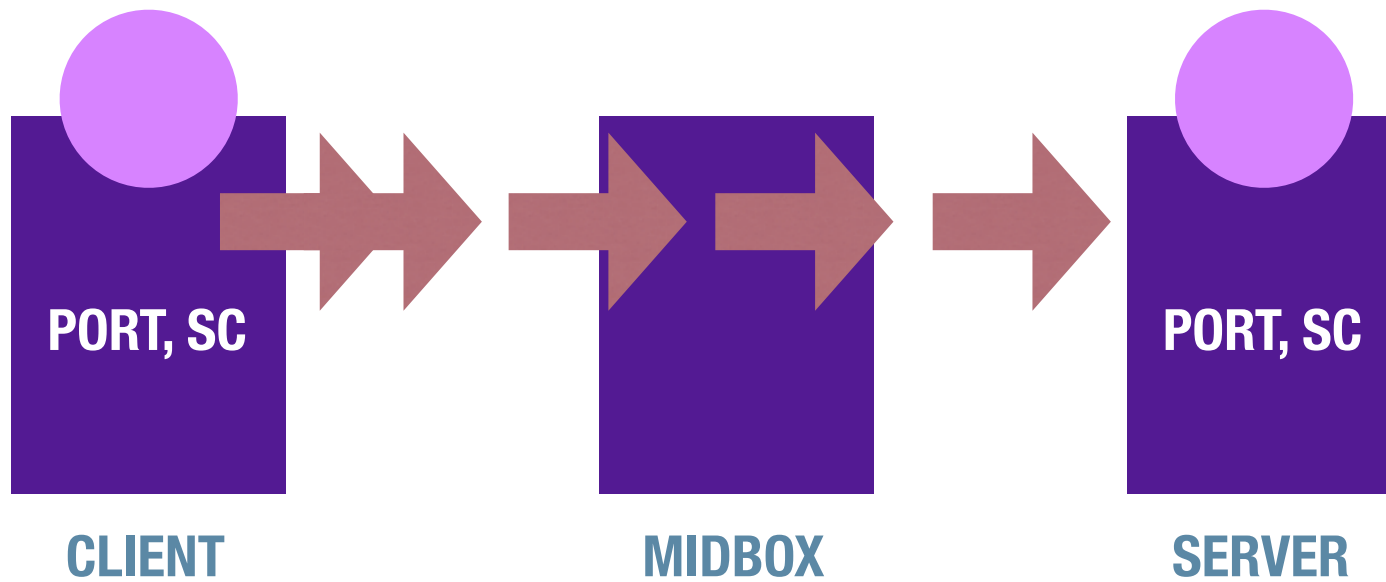
draft-ietf-dccp-serv-codes-03.txt

DCCP WG, IETF-70, VANCOUVER

Purpose of draft

- * Describes usage of Service Codes (SC) by DCCP
- * Allocates SC for some well-known services
- * Updates RFC 4340

How this works



WG 01,02 updates

- * Lots of comments and inputs
- * Historical section added
- * Removed new semantics for SC=0
- * Discussions with Eddie Kohler

WG 03 Update

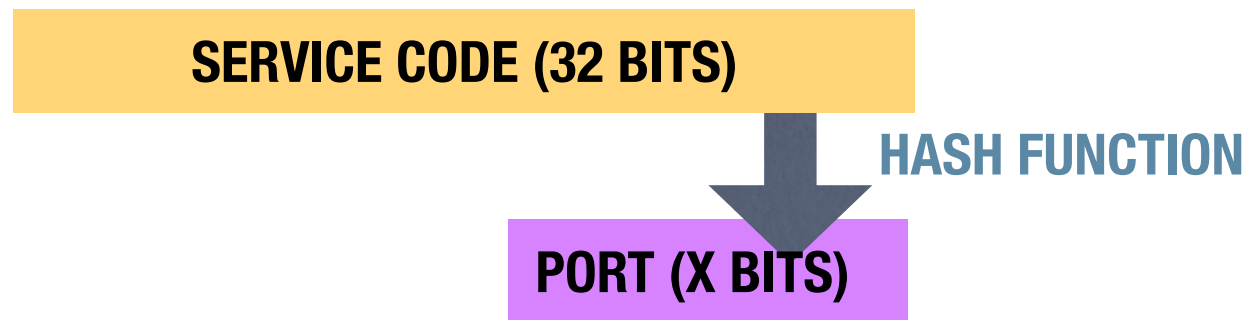
- * Fixed open-issues marked in previous revs
- * Technical argument seems good now (to me)
- * Benchmarking Services section updated

Change to IANA policy?

- * Well-known ports have been clarified.
 - * Alternatives SIP, SRV.
- * Suggested at last IETF...
 - * All applications should be able to easily get ports:
 - * *“IANA should allocate well-known DCCP ports on demand to anyone to applies, without requiring a specification or additional justification.”* MH
 - * *Could allocate port at IANA with SC value?*

When no port...

- * Do we have to register these at IANA?
- * You may not need one (even if no signaling)!



- * But, hashes can clash...
- * SC resolves this and uniquely identifies apps

Suitable algorithm?

```
int sport; /* server port */
```

```
s_port = sc[0]^(sc[1]<<3)^(sc[2]<<5)^(sc[3]<<7)| 0xC000;
```

- * RFC4340, would restrict this to the top 16k ports:
 - * *“Well Known and Registered Ports SHOULD NOT be used without registration.”*
- * **Is this OK? - can we allow more?**

So... current suggestion:

- * Use one of these methods:
 - * Use a well-known port
 - * Choose & use an out-of-band signal
 - * Hash the SC to a server port
- * If you need, ask IANA for your own well-known port
- * So.... do we really NEED to make allocation easier?

DCCP Port Numbers registry

- * Similar to UDP, TCP, SCTP...
- * But, labels ports with SC
- * DCCP can use the same port more than once
- * RFC 4340: *“Multiple DCCP registrations for the same port number are allowed as long as the registrations' Service Codes do not overlap.”*
- * COULD have more than one entry per port!
- * Do we really need multiple lines per port?

Specific updates to 4340

Applications SHOULD NOT use a **Service Code of zero**.

Application writers that need a temporary Service Code value SHOULD choose a value from the **private range** (Section 2.3).

Applications intended for deployment in the Internet are encouraged to use an **IANA-defined Service Code**. If no specific Service Code exists, they SHOULD request a new assignment from the IANA.

An implementation SHOULD allow **more than one Service Code** to be associated with a passive server port, enabling multiple applications, or multiple versions of an application, to listen on the same port, differentiated by Service Code.

An implementation SHOULD provide a method that **informs a server** of the Service Code value that was selected by an active connection.

A specific Service Code value MAY be associated with **more than one server port** value.

Are we finished yet?

- * We need to clarify IANA allocation
- * Offers to help with Appendix with API for SC
 - * (or remove and do it some other day)
- * Comments please!