User Settable Proxy Listen Address

Proposal: 0006
Authors: Operator Foundation
Status: Implemented

Implementation: https://github.com/OperatorFoundation/shapeshifter-dispatcher

Introduction

In the PT 1.0 specification, and carried over to the PT 2.1 specification, there is no way to set the port on which the proxy listens when launching a dispatcher client. This proposal provides an option for setting this listening address on the dispatcher client through a -proxylistenaddr command line flag.

Motivation

It is possible to set the listener address on the server using the -bindaddr command line option or the TOR_PT_SERVER_BINDADDR environment variable. However, this is defined to work only on the server. For the client there is no equivalent option. Currently the only way for the user to get the proxy listener address is to allow the client to randomly generate one, which is then provided over stdout as part of the IPC protocol.

The ability to specify a proxy listener address has been one of the most requested features for the dispatcher.

Proposed solution

A new command line flag will be added that allows the user to specify the proxy listener address.

Design

The command line flag -proxylistenaddr [address:port] will be added to the dispatcher. When this flag is used, the dispatcher client will use this address and port instead of making its own choice. The proxy listener address will still be printed to stdout as normally done in the IPC protocol in order to make this change backwards-compatible.

Effect on API Compatibility

This change only affects the IPC protocol and has no effect on API compatibility.

Effect on IPC Compatibility

This change adds a new optional flag, but does not add any new requirements. Therefore, the change is backwards-compatible with the previous revision of the specification.

Alternatives considered

An alternative would be to override the functionality of the -bindaddr option to specify the server listener address on the server and the proxy listener address on the client. The reason that this might be confusing is because the -bindaddr parameters on the server and the client would have to use different microformats for the argument. A server bind address looks like “-bindaddr Replicant-127.0.0.1:8888” as it specifies the name of the transport as well as the IP address and port for the listener. The client bind address would look like “-bindaddr 127.0.0.1:8888” as a transport name is not required. Therefore, it is potentially less confusing to use different command line flags for these two different, but similar, configuration parameters.