

NetFlow Rendering:

Visual comparison of different *active flow timeout* values and datapoint resolutions

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Netflow Resolution Analysis

The following 16 graphs cover all permutations of:

- “Webview Step” – the internal datapoint resolution tracked by Webview (values include 1, 5, 10, 15, 30, 60, 120, and 300 seconds).
- “Flow Timeout” – the active flow timeout value configured on the exporting router (values include 1 and 60 seconds – the lowest configurable values for Flexible Netflow and traditional Netflow, respectively).

Observations

- The pink color represents long-term bulk file transfers. Its peaks and valleys are similar on all graphs.
- The orange color represents bursty HTTP transactions. Note the peaks on (A) are twice as high as any other. Graphs (B) through (N) are similar, but (O) and (P) have peaks that are only 50-66% as high.

Interpretations:

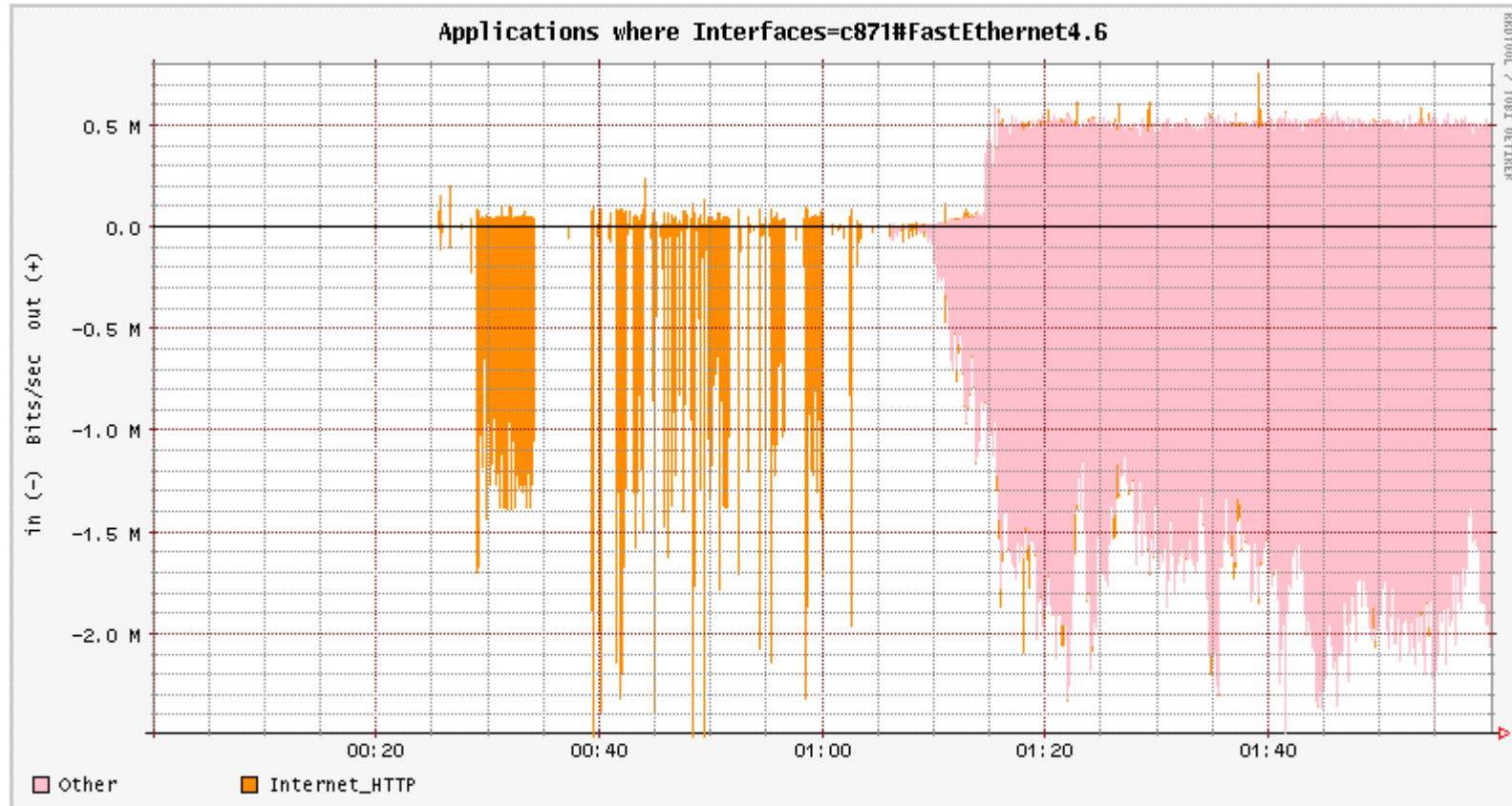
- There is little value in having an active flow timeout less than the rendering resolution.
- A one-second timeout & resolution yields the most accurate peaks.
- Resolutions of between 5 and 120 seconds produce very similar peaks.
- A resolution of five minutes produces peaks that are severely dampened.

Conclusion:

- Do not use a resolution higher than 120 seconds. In practice, a 60-second active flow timeout and 60-second resolution is a good compromise.

(A) Flow Timeout: 1sec

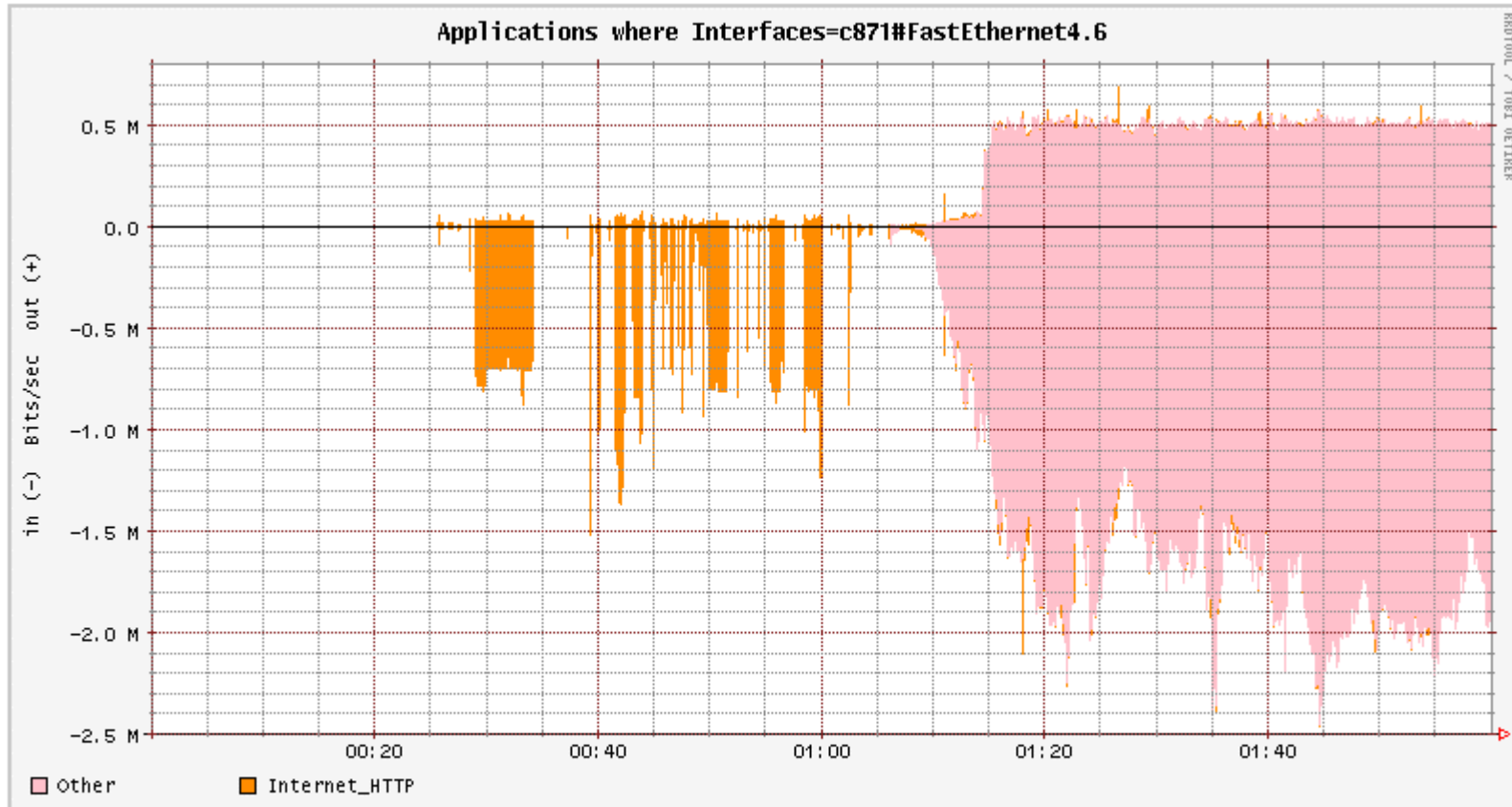
Webview Step: 1sec



	Maximum		Average	
	<i>in</i>	<i>out</i>	<i>in</i>	<i>out</i>
Other	2,493K	595K	693K	194K
Internet_HTTP	3,600K	259K	202K	12K

(B) Flow Timeout: 60sec

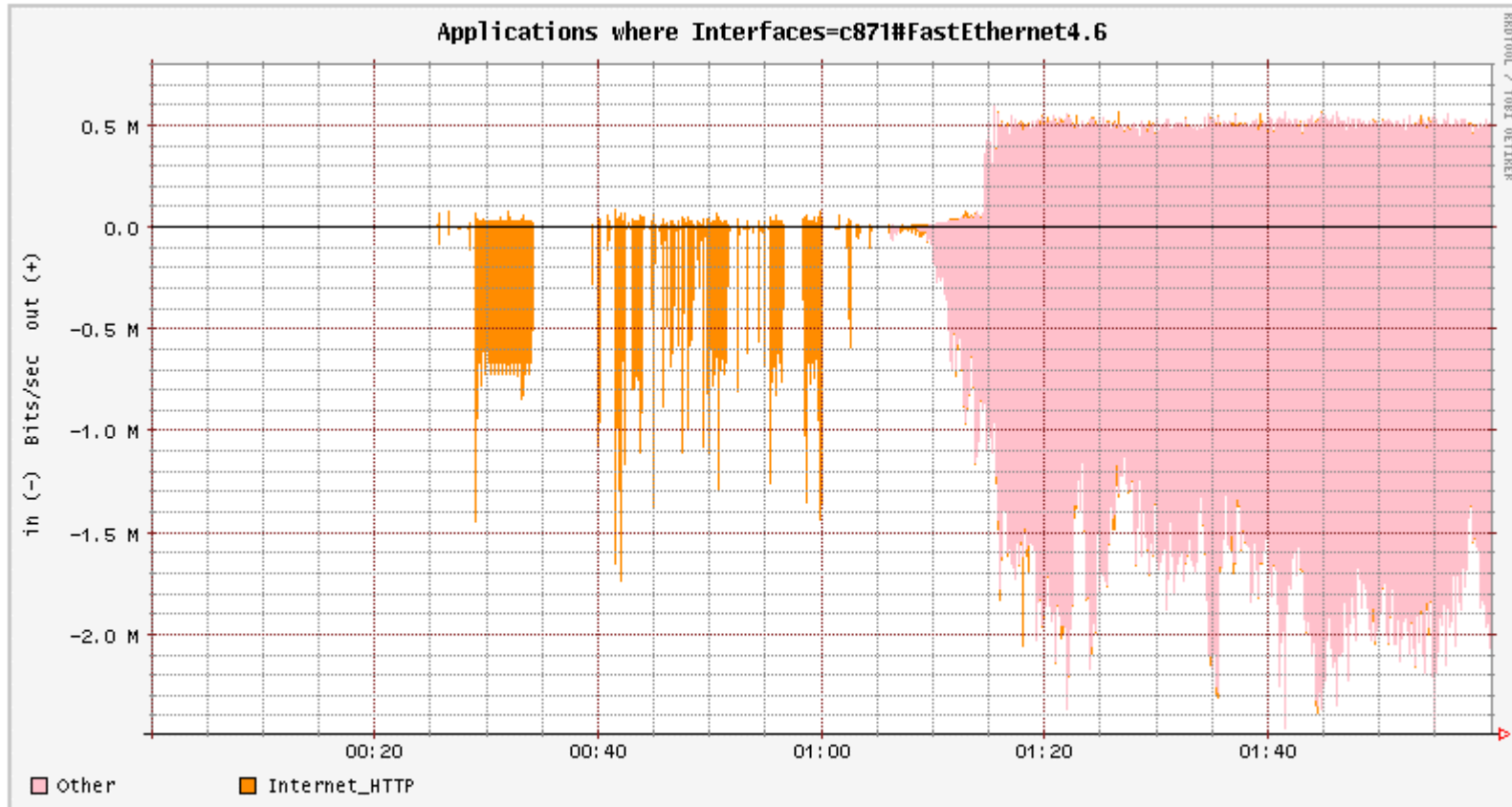
Webview Step: 1sec



	Maximum		Average	
	<i>in</i>	<i>out</i>	<i>in</i>	<i>out</i>
Other	2,458K	575K	693K	194K
Internet_HTTP	1,524K	173K	118K	7K

(C) Flow Timeout: 1sec

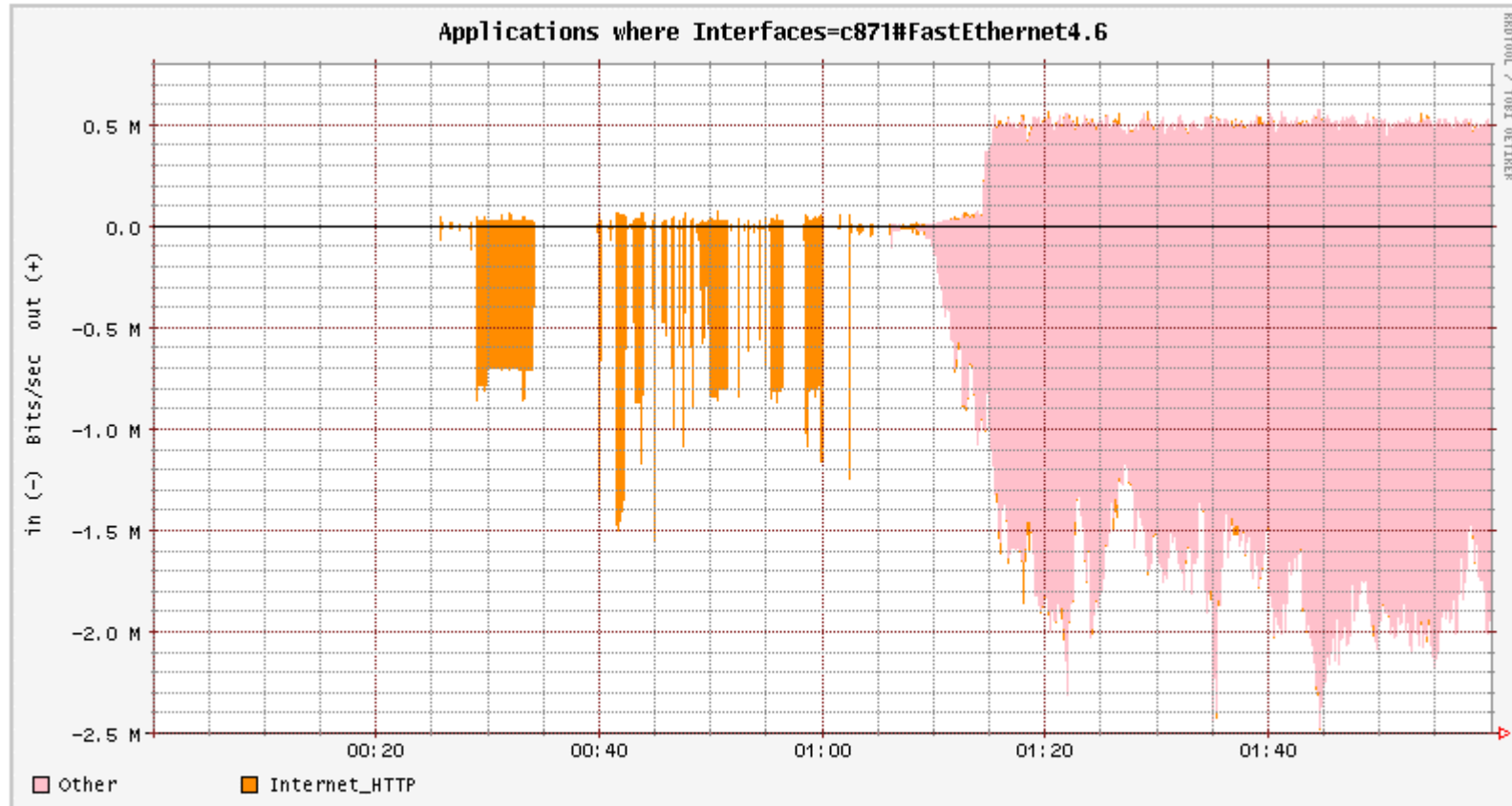
Webview Step: 5sec



	Maximum		Average	
	<i>in</i>	<i>out</i>	<i>in</i>	<i>out</i>
Other	2,491K	595K	693K	194K
Internet_HTTP	1,742K	82K	116K	6K

(D) Flow Timeout: 60sec

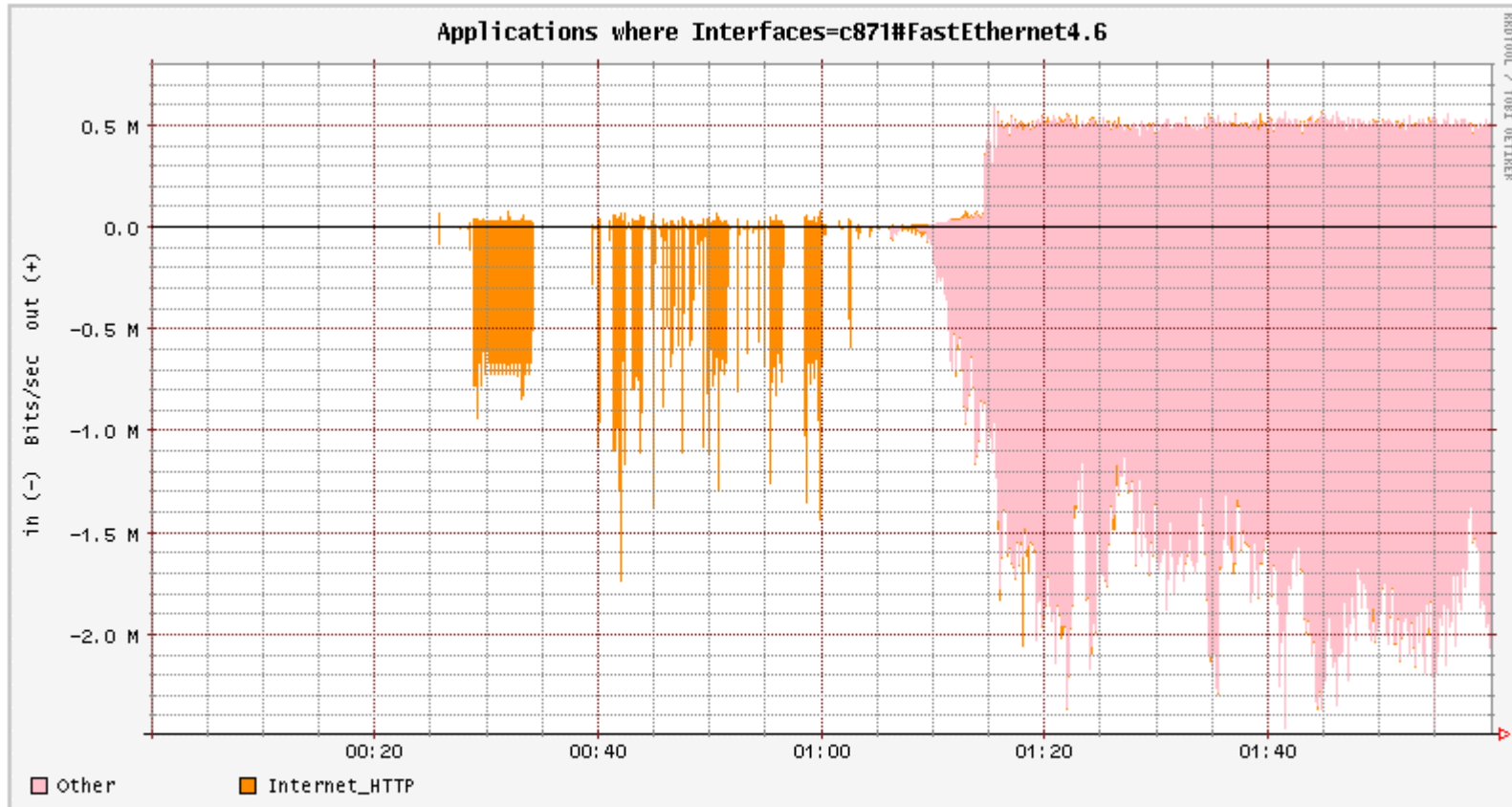
Webview Step: 5sec



	Maximum		Average	
	<i>in</i>	<i>out</i>	<i>in</i>	<i>out</i>
Other	2,477K	573K	693K	195K
Internet_HTTP	1,559K	72K	112K	6K

(E) Flow Timeout: 1sec

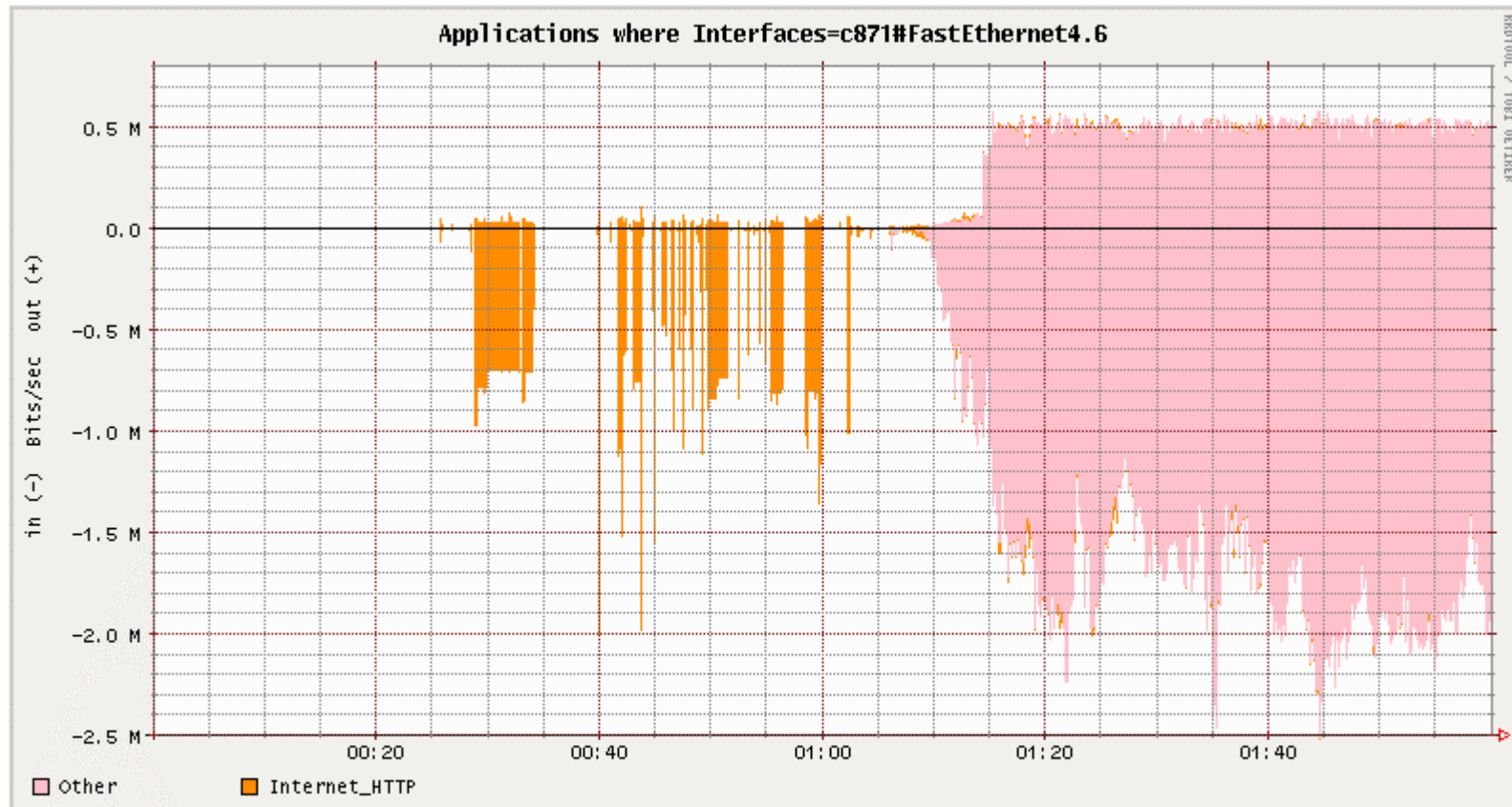
Webview Step: 10sec



	Maximum		Average	
	<i>in</i>	<i>out</i>	<i>in</i>	<i>out</i>
Other	2,491K	595K	693K	194K
Internet_HTTP	1,742K	75K	112K	6K

(F) Flow Timeout: 60sec

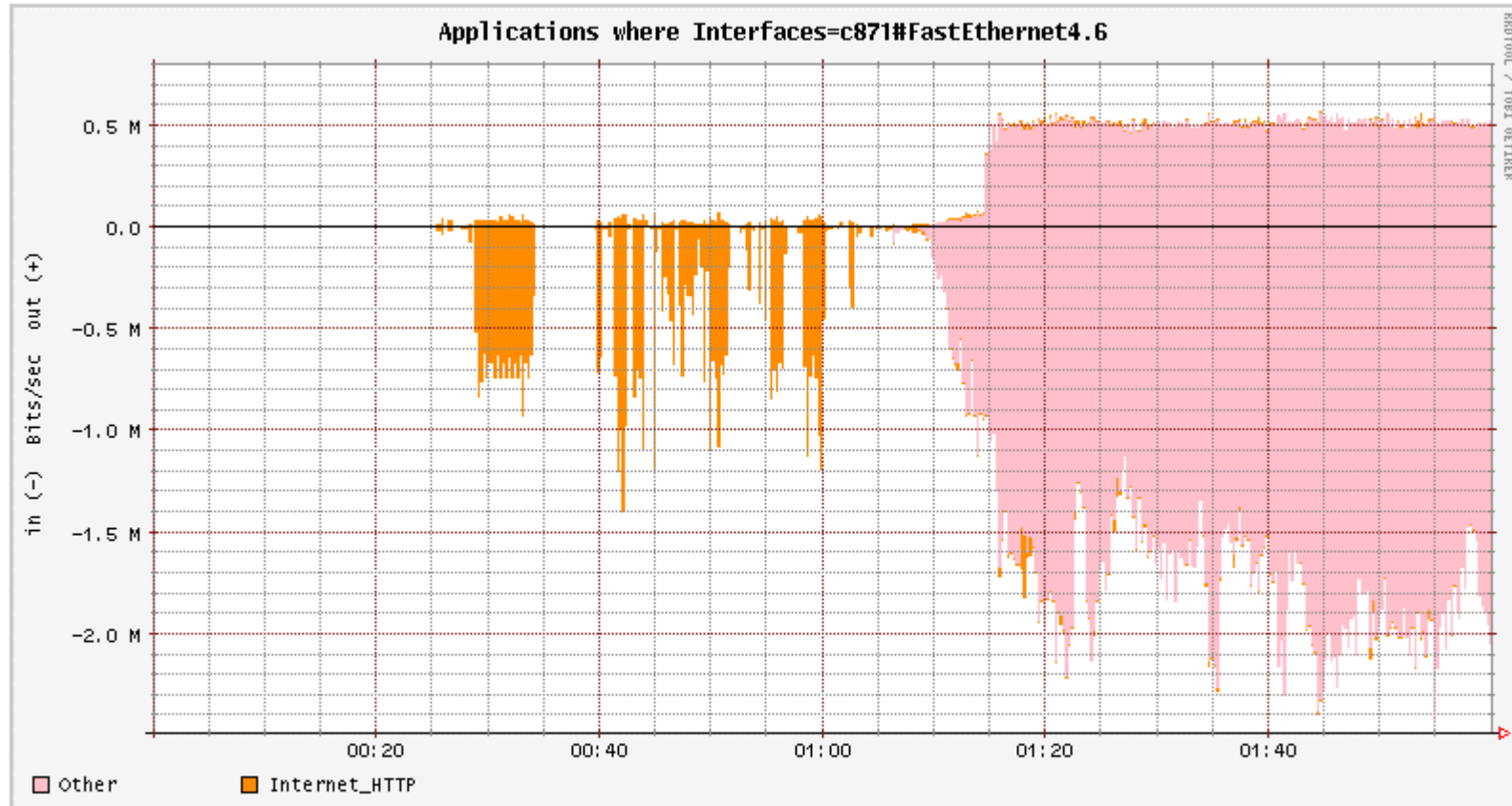
Webview Step: 10sec



	Maximum		Average	
	in	out	in	out
Other	2,509K	573K	694K	195K
Internet_HTTP	2,007K	99K	110K	6K

(G) Flow Timeout: 1sec

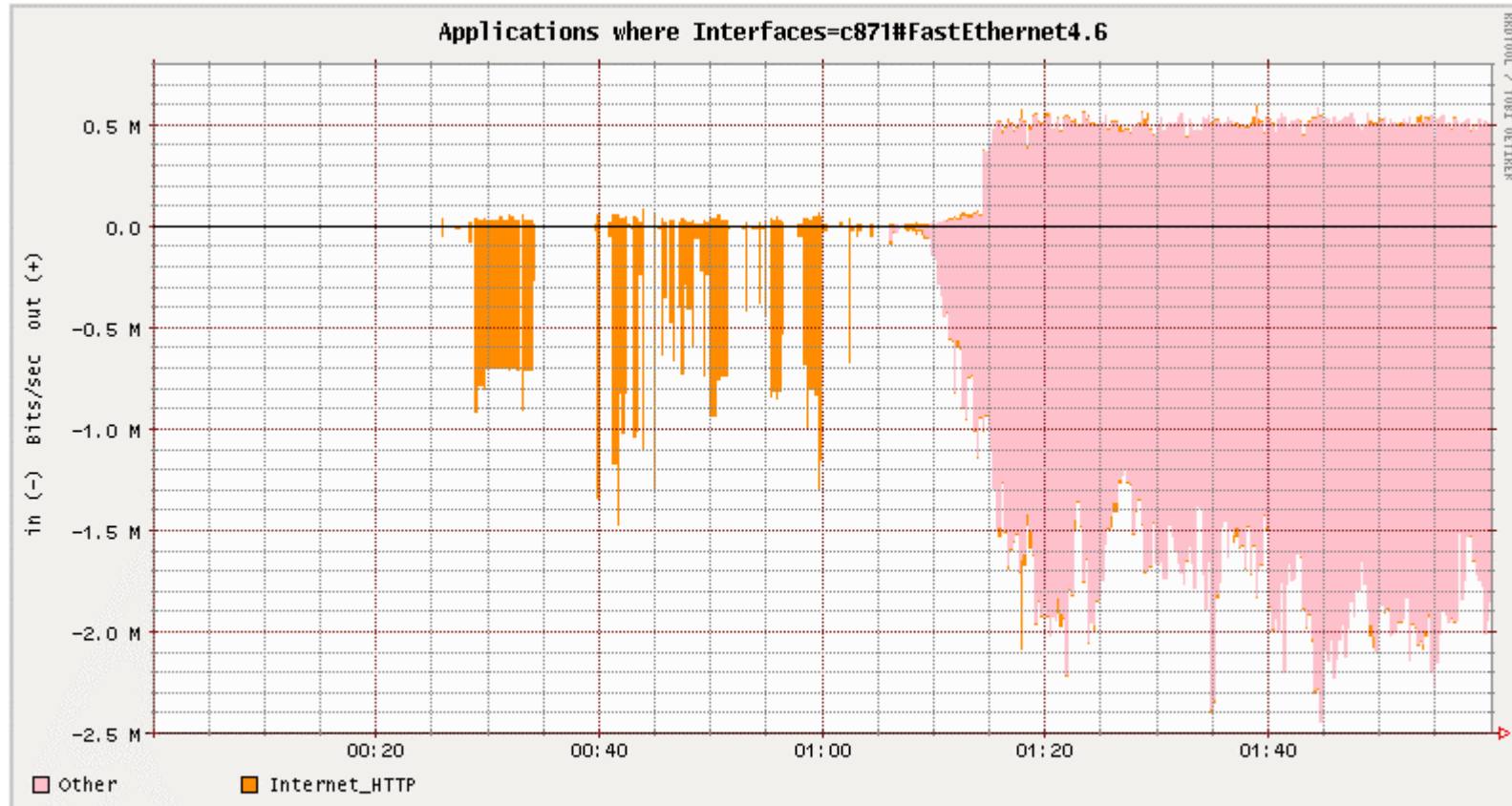
Webview Step: 15sec



	Maximum		Average	
	<i>in</i>	<i>out</i>	<i>in</i>	<i>out</i>
Other	2,428K	565K	693K	194K
Internet_HTTP	1,403K	70K	109K	6K

(H) Flow Timeout: 60sec

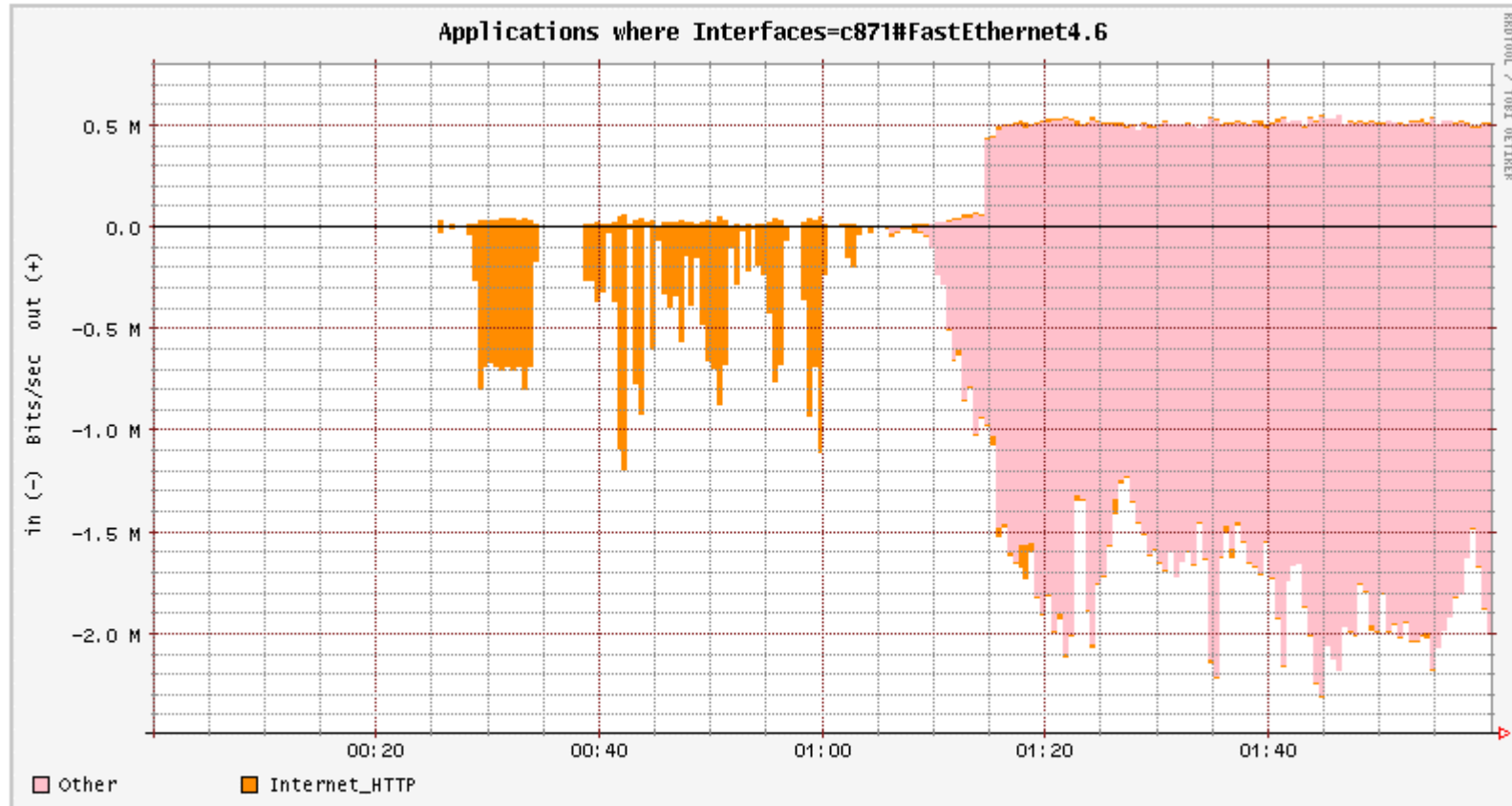
Webview Step: 15sec



	Maximum		Average	
	<i>in</i>	<i>out</i>	<i>in</i>	<i>out</i>
Other	2,441K	580K	695K	195K
Internet_HTTP	1,472K	85K	112K	6K

(I) Flow Timeout: 1sec

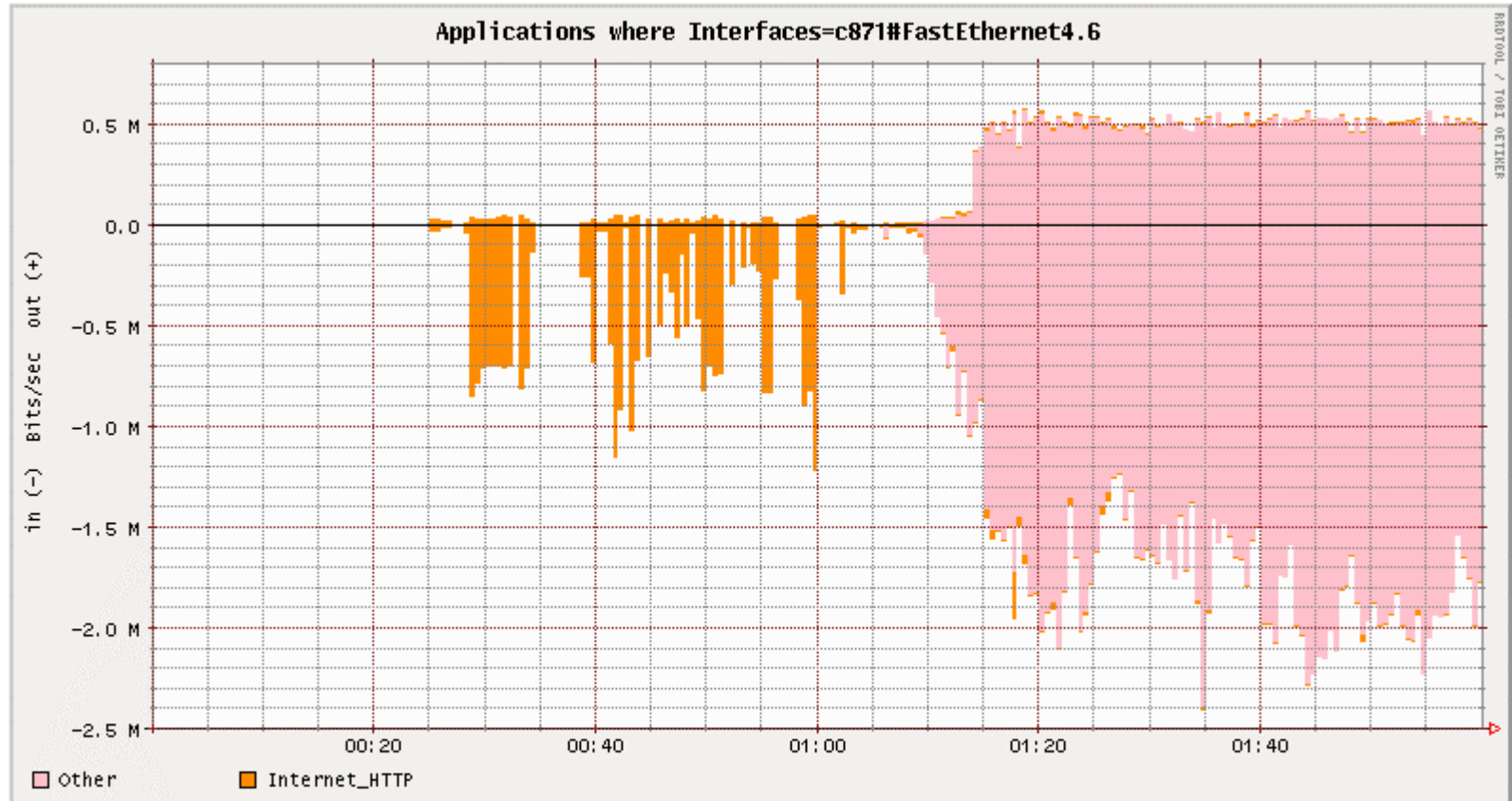
Webview Step: 30sec



	Maximum		Average	
	<i>in</i>	<i>out</i>	<i>in</i>	<i>out</i>
Other	2,308K	545K	693K	194K
Internet_HTTP	1,188K	55K	112K	6K

(J) Flow Timeout: 60sec

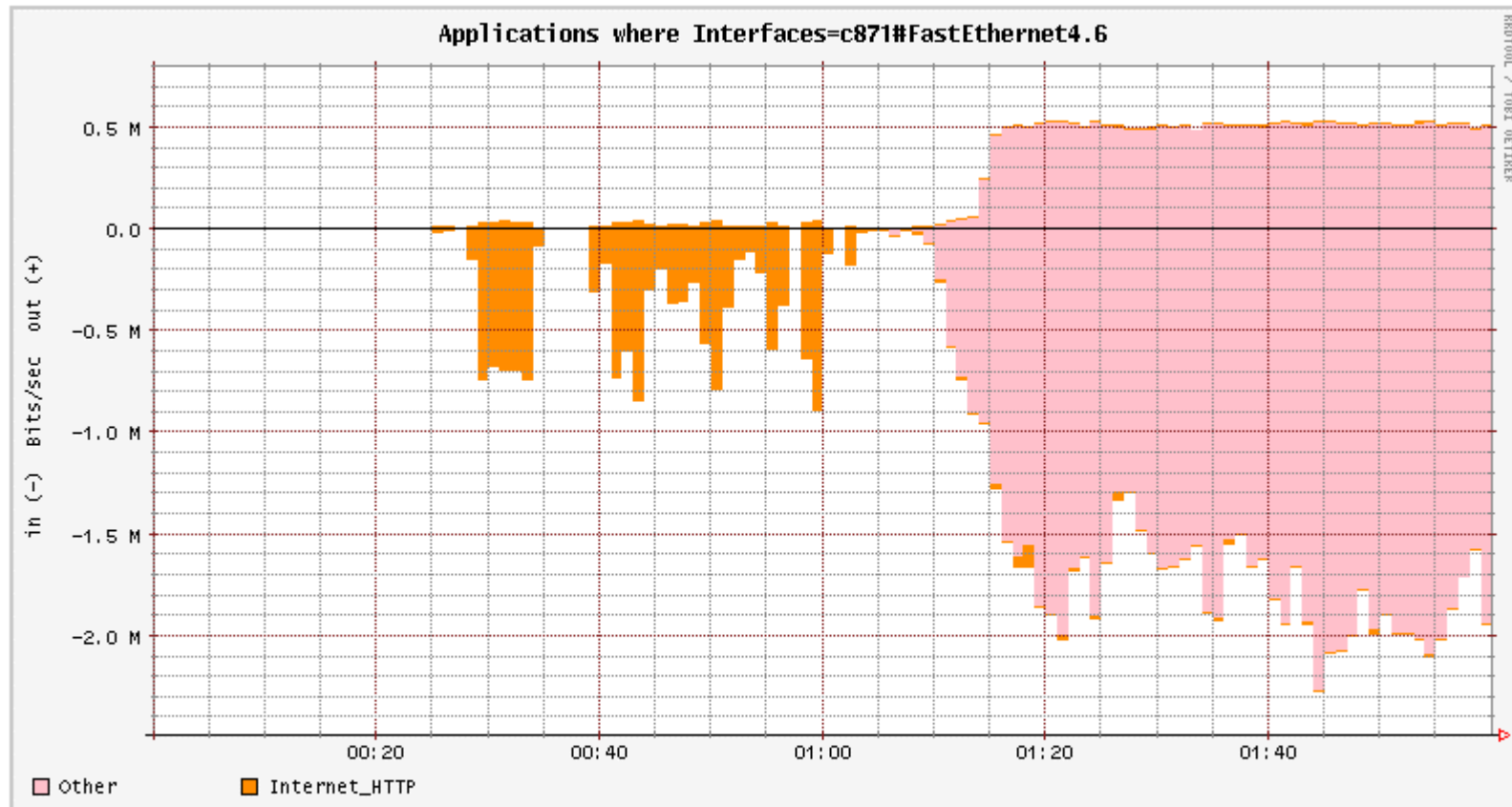
Webview Step: 30sec



	Maximum		Average	
	<i>in</i>	<i>out</i>	<i>in</i>	<i>out</i>
Other	2,397K	571K	696K	195K
Internet_HTTP	1,220K	50K	112K	6K

(K) Flow Timeout: 1sec

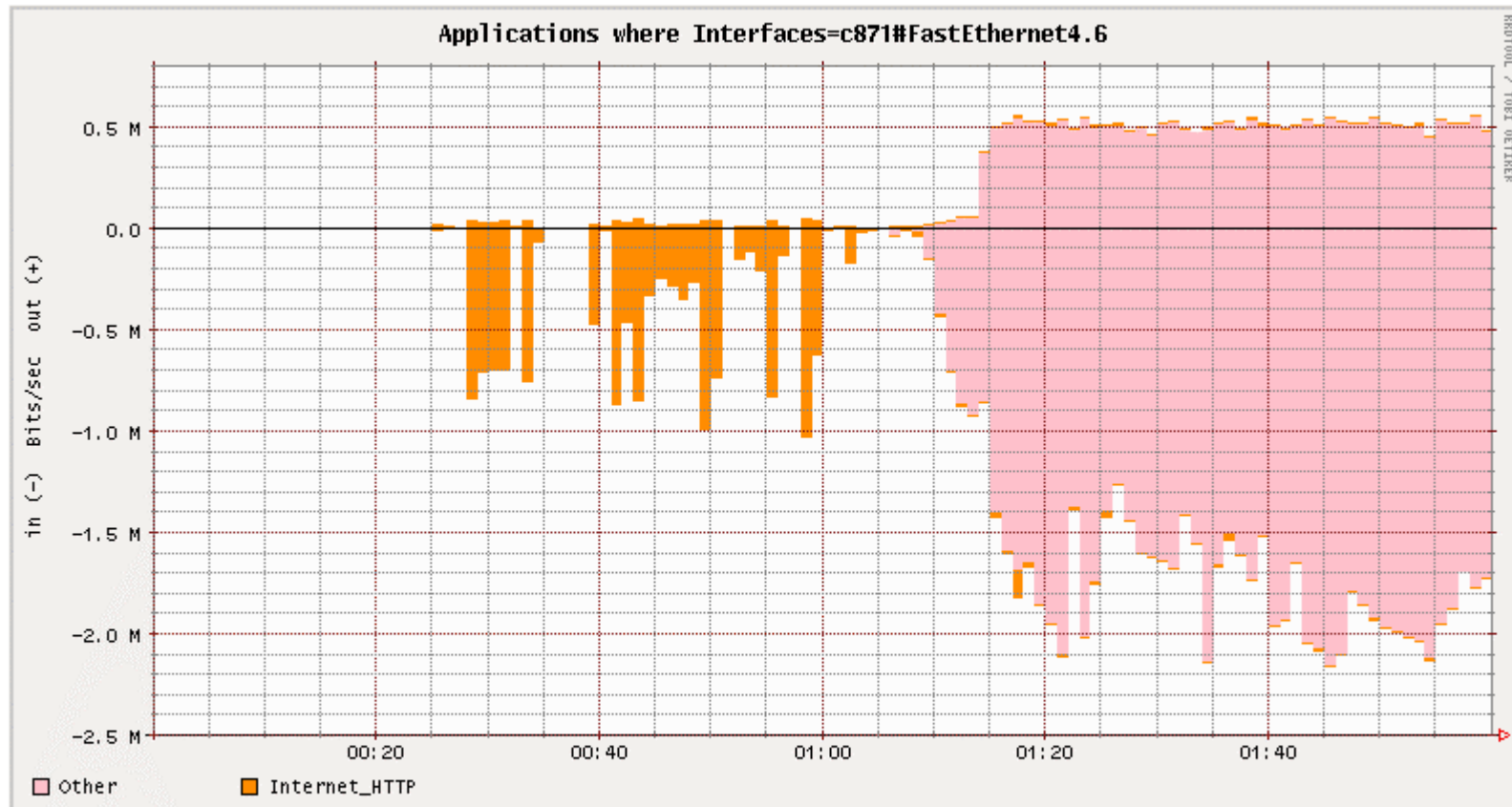
Webview Step: 60sec



	Maximum		Average	
	<i>in</i>	<i>out</i>	<i>in</i>	<i>out</i>
Other	2,275K	532K	693K	194K
Internet_HTTP	896K	43K	111K	6K

(L) Flow Timeout: 60sec

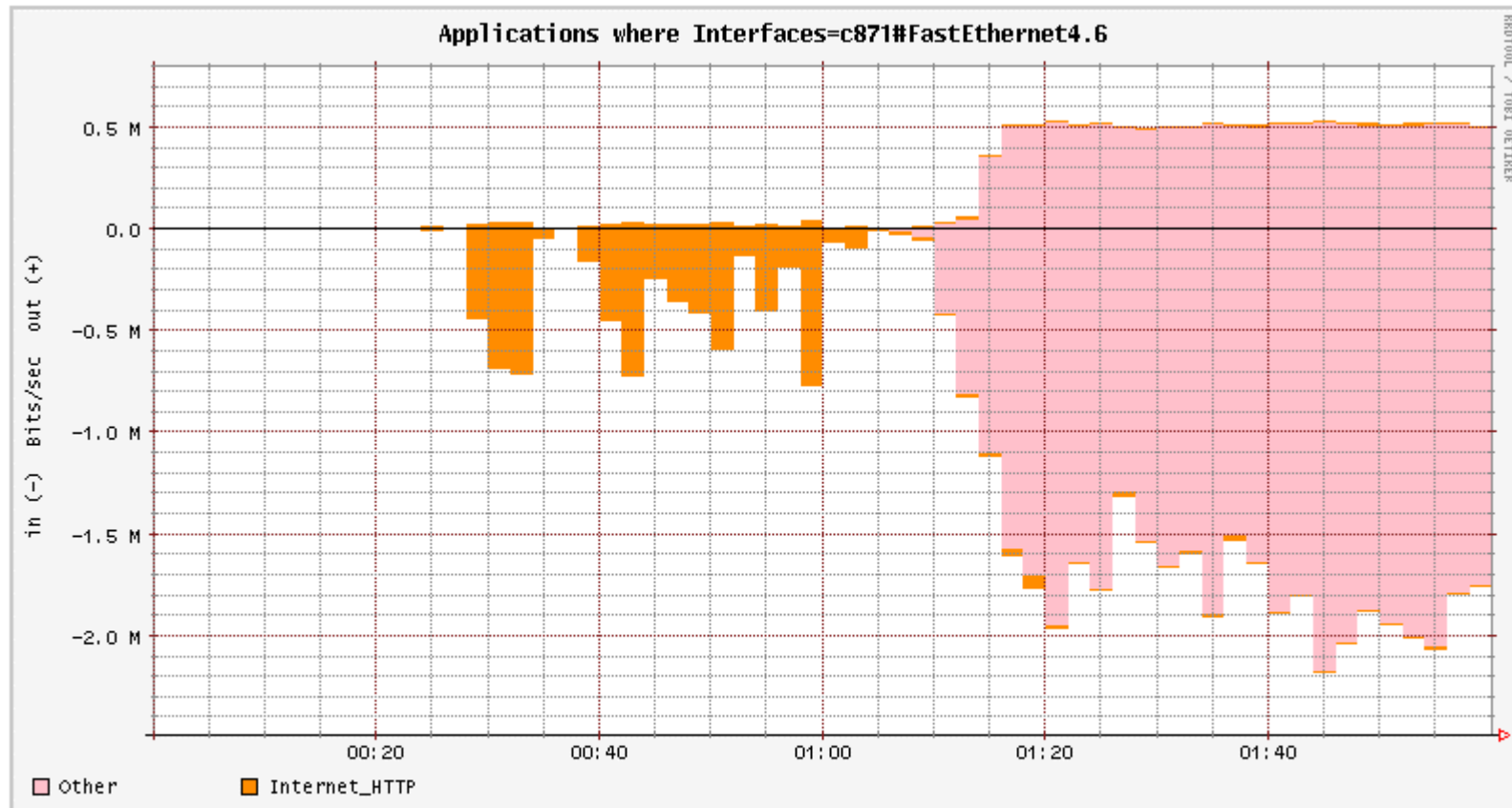
Webview Step: 60sec



	Maximum		Average	
	<i>in</i>	<i>out</i>	<i>in</i>	<i>out</i>
Other	2,156K	554K	699K	197K
Internet_HTTP	1,032K	45K	111K	6K

(M) Flow Timeout: 1sec

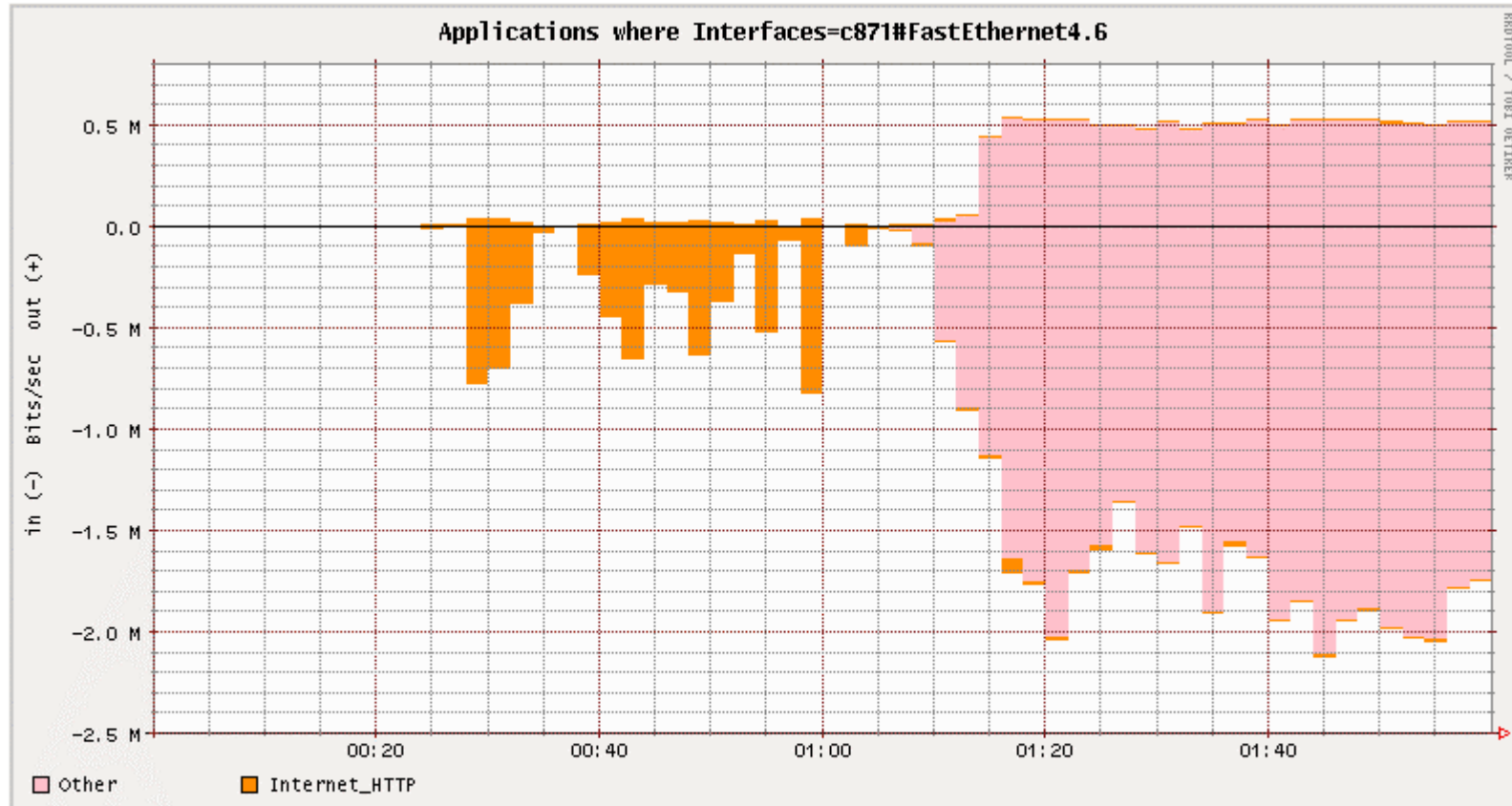
Webview Step: 120sec



	Maximum		Average	
	<i>in</i>	<i>out</i>	<i>in</i>	<i>out</i>
Other	2,183K	530K	693K	194K
Internet_HTTP	769K	36K	111K	6K

(N) Flow Timeout: 60sec

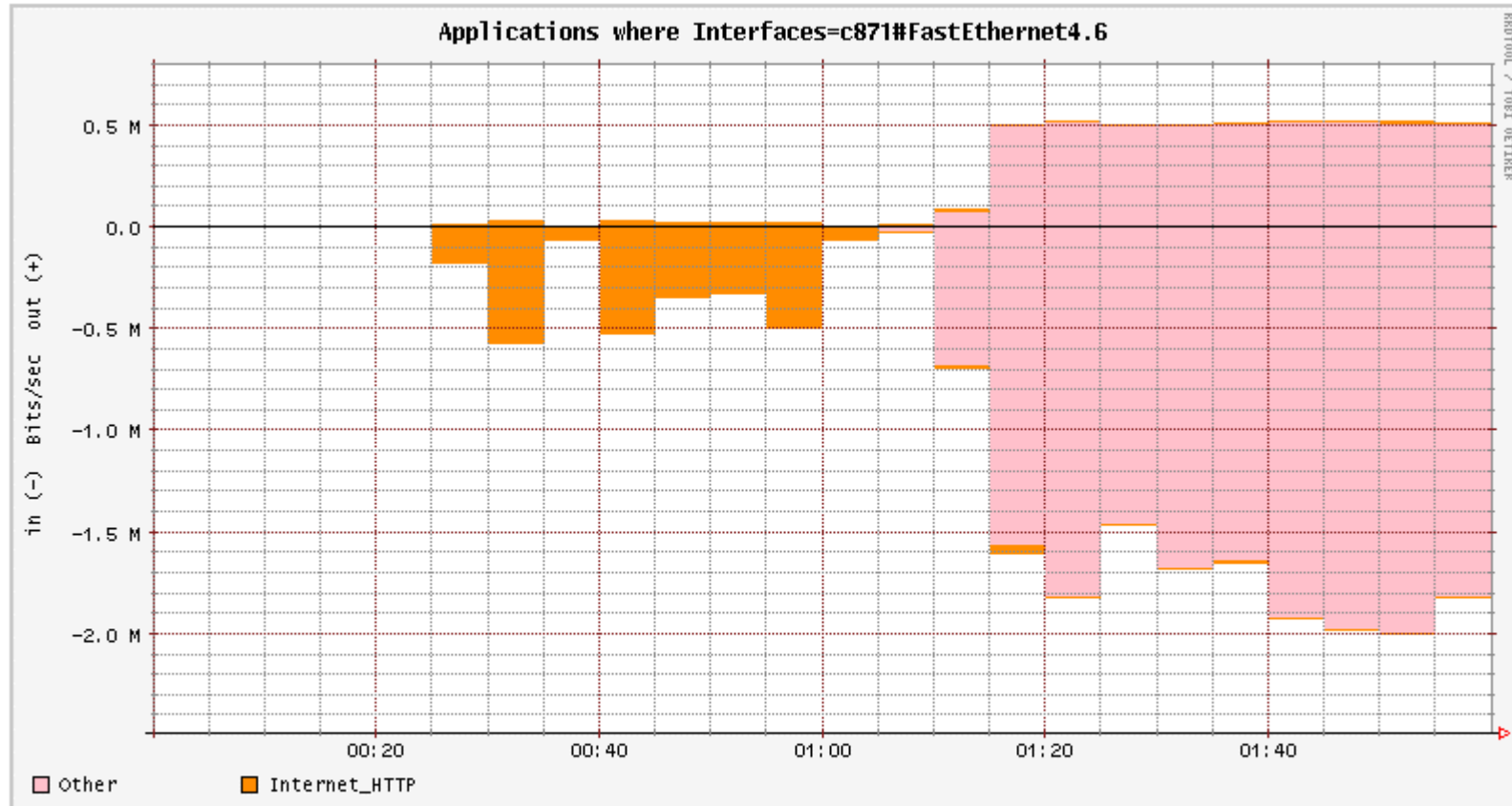
Webview Step: 120sec



	Maximum		Average	
	<i>in</i>	<i>out</i>	<i>in</i>	<i>out</i>
Other	2,118K	534K	699K	197K
Internet_HTTP	826K	38K	111K	6K

(O) Flow Timeout: 1sec

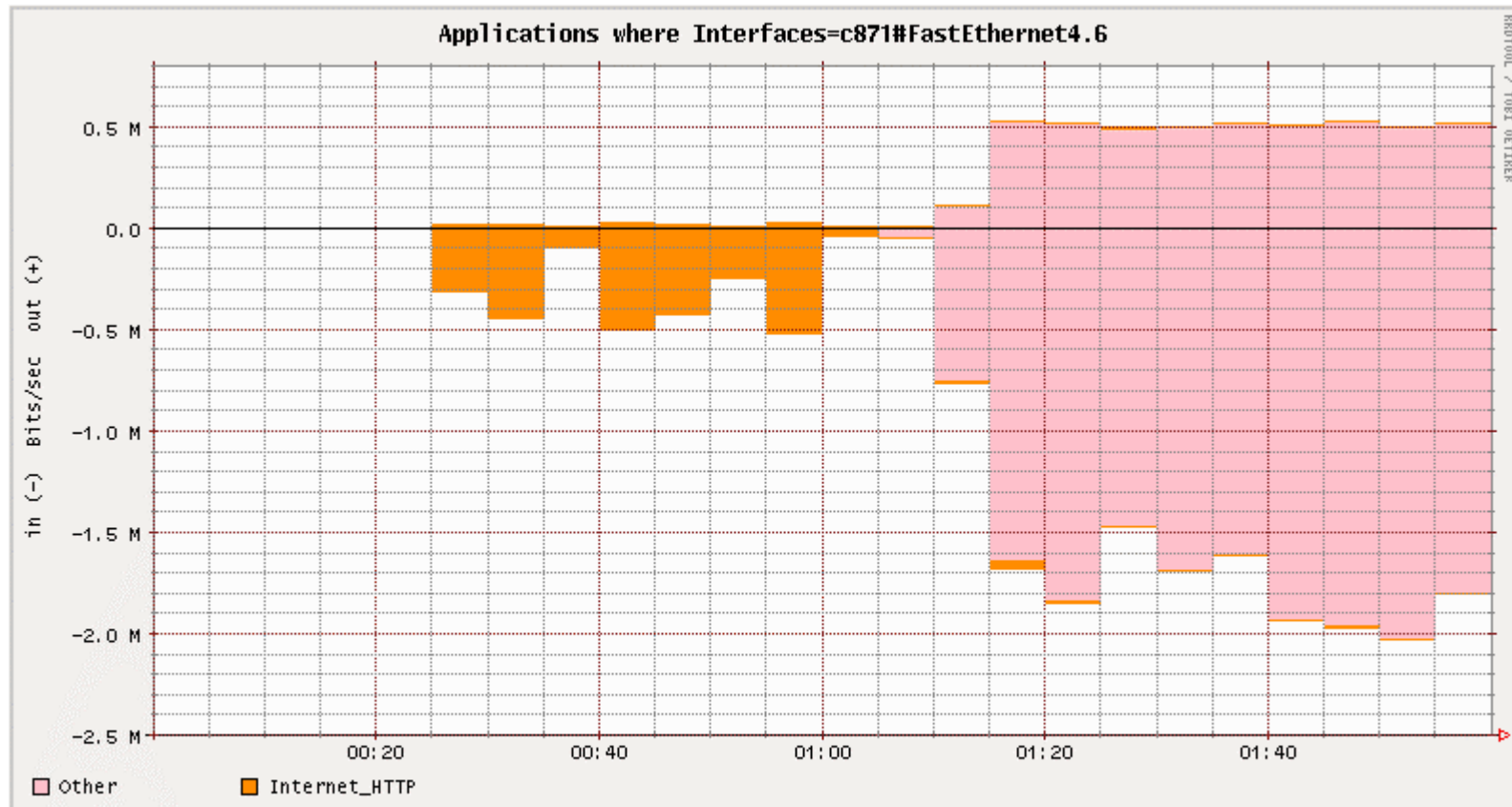
Webview Step: 300sec



	Maximum		Average	
	<i>in</i>	<i>out</i>	<i>in</i>	<i>out</i>
Other	1,999K	521K	693K	194K
Internet_HTTP	577K	27K	111K	6K

(P) Flow Timeout: 60sec

Webview Step: 300sec



	Maximum		Average	
	<i>in</i>	<i>out</i>	<i>in</i>	<i>out</i>
Other	2,030K	530K	699K	197K
Internet_HTTP	523K	26K	111K	6K