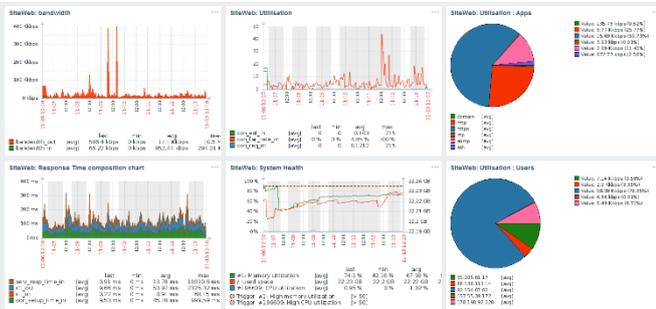


Using H5-App and H5-Flow data's in Zabbix



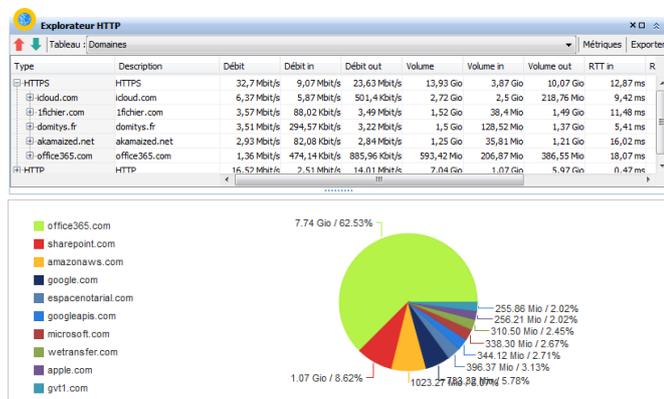
Zabbix

Zabbix is an enterprise-class open source distributed monitoring solution designed to monitor and track performance and availability of network servers, devices, services and other IT resources. Zabbix possesses a flexible notification mechanism that allows users to configure e-mail, Jabber and SMS based alerts for any kind of event which helps administrators to recognize server and device problems faster. Zabbix is being developed non-stop and its functionality and performance is increasing rapidly with every new release. The monitoring solution is being actively used by SMBs and large enterprises across all industries including, but not limited to Finance and Insurance, IT&T, Health Care, Public Sector, Retail, Energy and Chemicals.

AXEL IT : Zabbix Reseller from France

Axel IT offices are located in France, Switzerland and Cameroon. The company offers to its customers personalized services with high value to meet their business demands.

Axel IT core business is to support and enable infrastructure and data center initiatives, offering solutions to optimize information systems through four activities: business solutions integration, organizational consulting, technical assistance/support and training. The company works on a national and international scope around specific services such as expertise and technology consulting, integration and deployment, IT operations and infrastructure consolidation.



H5 Appliance and H5-Flow by H5 audits

Founded in 2003, H5 audits is a software provider of Network Performance Intelligence or Network and Applications Performance Monitoring solutions.

Having successfully performed over 1000 audits for more than 100 clients, H5 audits has naturally evolved from a services company towards a solutions provider model in 2008.

In 2009, the first H5-Appliance was released and delivered. This product range allows global Network flows monitoring and has been since the H5 state of the art product in H5 audits portfolio. Several models are available (H5-100V, H5 100cc, H5-200, H5-200cc H5-300cc, H5-700 & H5-700cc).

In 2012, H5 audits released the H5-Flow appliance capable of collecting hundreds of NetFlow and sFlow tickets of business network routers and switches.

Since 2014, the availability of the new portal Reporting H5-Performance-Reporter allows to broadcast information to all audience within the IT department, and to Business departments (Marketing, Finance, Human Resources, etc.) in an adapted format for each function and usage: **the right information for the right person in the right format at the right time**

From 2016, the release of CC model (Rolling Buffer) on H5 Appliance range guarantee to access Network traces on a past or present period for 10 Mbps to 10 Gbps bandwidth. Virtual Appliances (H5-100V and H5-200V) were also released during 2017.

Since 2018, H5 audits products range is unified around the "Network Performance Intelligence" concept and meets all business network traffic visibility requirements in Cloud environments (private, public, hybrid).

Network visibility: What's at stake?

Most traditional solutions for IT visibility are exclusively aimed at and specialized in one functional and technical layer.

Network infrastructure administration tools such as SNMP monitoring and reporting tools can supply simple IP architecture views based on proven and standard models that are easy to implement. They enable network administrators to have a vision of devices or specific network link but are extremely limited for discerning use and performance assessments from a business standpoint: they do **not supply "business visibility"**.

H5 audits solutions (H5-Appliances and H5-flow) provides **business visibility based on Flow monitoring** to Engineers and IT Managers.

Challenge of integration of H5 metrics in Zabbix

Complete Network Performance Management on a single console with Zabbix - Bridge the Usage gap between Supervision and Troubleshooting.

A performance first approach to manage network infrastructure requires an understanding of the relationship between infrastructure use and application performance. Zabbix gives you insight into this relationship with an integrated view of key metrics provides by H5 audits solutions : end-to-end performance, traffic analysis, Voip quality with existed device performance. From this intuitive Zabbix portal, you can access a top-down view of all applications – data, video and voice – for your entire network infrastructure. Alf needed, you can drill into detailed information provides by H5 Flow and/or H5-Appliance.

CONTACT

Zabbix can provides role-specific views for different groups in your organisation, such as network engineering, operations and voice management to enable staff at all levels to :

- Measure End-user application response times
- Identify the applications and users consuming bandwidth
- Avoid unnecessary WAN costs
- Isolate performance problems to the application, server or network
- Predictable network growth from utilization of historical trends in QoS policy changes.
- Timely isolation and resolution of network issues.



What is H5 Appliance®?

With adapted and dedicated information, managers can identify root-causes of performance problems and validate the impact of a Network planned environment change (or not planned). In that way, they are provided with the necessary and valuable information to take the right decision at the right time. Structural savings are also possible along with Customer services delivery optimization and enhancement.

This information allows:

- Identify requested web services per domains and sub-domains.
- Measure hosted flows performance in private/public/hybrid cloud services offerings.
- Control delivered services considering network performance and hosting performance (servers and applications).

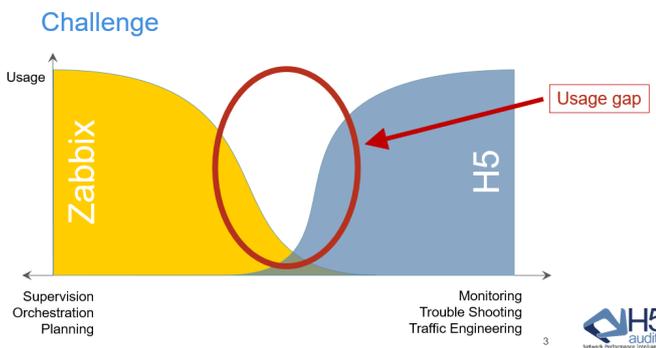
H5-Appliance® shows Network engineers, IT managers and IT Direction how Cloud applications traffic impact Network performance.

H5-Appliance in Cloud mode – How to implement the solution?

Http/ https module of H5-Appliance® solution monitors the entire http/https applications at the condition of sending a copy of all exchanged flows for analysis. Solution is available on hardware mode or virtual mode.

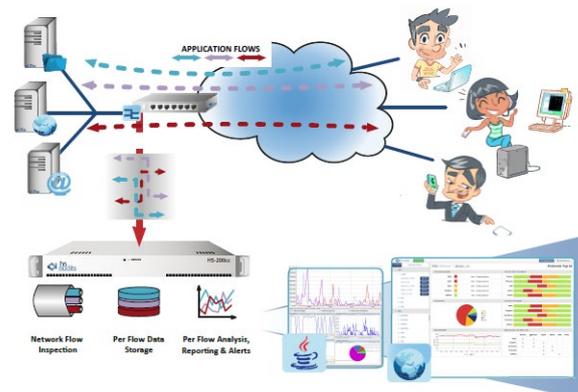
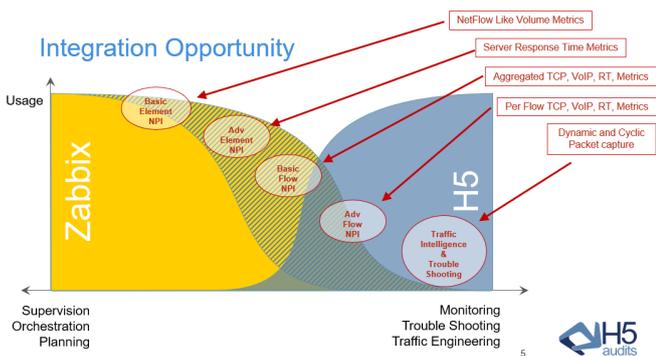
Virtual H5-Appliances are compatible with ESX VMware or Hyper-V Microsoft.

It is possible to work with a mixed virtual and hardware H5 appliances environment to answer the needs of hybrid systems. H5-Appliance are self-standing and autonomous units, capable of high output flows decoding (15 000 packets/sec for H5-100cc, 1 800 000 packets/ sec for H5-700). They produce on-the-fly metrics based on real traffic that are transmitted directly from a network switch's port-mirroring or from a network tap.



Who is concerned by the subject of integration?

- Customers who migrates all their applications in the public cloud (Microsoft, Amazon, google, ...) and need to get some metrics on this new usage.
- Enterprises who need to do capacity planning on their links.
- Help companies to identify the bottlenecks on their network? Who is using the bandwidth, which users, which protocol?



CONTACT

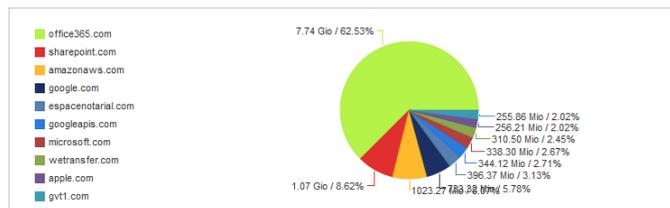
Collection and Monitoring of http/https conversations. How does H5-Appliance Cloud® work?

H5-Appliance equipment supplies automatically monitored network traffic metrics. As example:

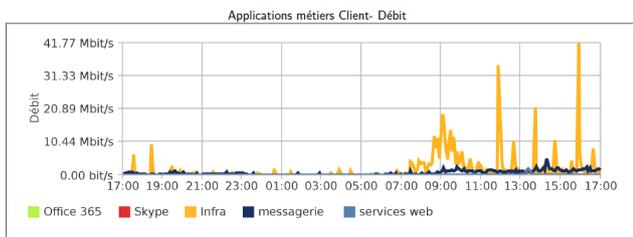
- Flow and Network throughput on main links, on remote sites or per application.
- Business Flow Volume identified and selected by TCP port number, IP server for Main site (HQ, Global) or for remotes sites (sub network identification).
- IP traffic matrix ID, exchanged volume, used protocols and actual performances
- Volume and Performance per IP Application.
- Fine-grained parameters on quality of service measurement (RTT, Initial connection time, Server response time, ...).

Type	Description	Débit	Débit in	Débit out	Volume	Volume in	Volume out	RTT in	R
HTTPS		32,7 Mbit/s	9,07 Mbit/s	23,63 Mbit/s	13,93 Gio	3,87 Gio	10,07 Gio	12,87 ms	
ikloud.com	ikloud.com	6,37 Mbit/s	5,87 Mbit/s	501,4 Kbit/s	2,72 Gio	2,5 Gio	218,76 Mio	9,42 ms	
ifichier.com	ifichier.com	3,57 Mbit/s	80,22 Kbit/s	3,49 Mbit/s	1,52 Gio	38,1 Mio	1,49 Gio	11,48 ms	
domtys.fr	domtys.fr	3,51 Mbit/s	294,57 Kbit/s	3,22 Mbit/s	1,5 Gio	128,52 Mio	1,37 Gio	5,41 ms	
akamaized.net	akamaized.net	2,93 Mbit/s	82,08 Kbit/s	2,84 Mbit/s	1,25 Gio	35,81 Mio	1,21 Gio	16,02 ms	
office365.com	office365.com	1,36 Mbit/s	474,14 Kbit/s	885,96 Kbit/s	593,42 Mio	206,87 Mio	386,55 Mio	18,07 ms	
HTTP	HTTP	16,52 Mbit/s	2,51 Mbit/s	14,01 Mbit/s	7,04 Gio	1,07 Gio	5,97 Gio	0,47 ms	

Everyone understands easily the importance to get the information related on https flows that circulate in clear onto the network in order to know visited sub-domains and domains. As more and more business applications are hosted in Software providers DC or in the cloud and only and solely accessible via https due to security reasons, it becomes critical for a numerous number of clients to access monitoring and visibility information for the encrypted flows.



For an Office365 https flow hosted in the cloud, you access all metrics related to outlook service thanks to a step by step drill-down and of the customer connected IPS for this service.

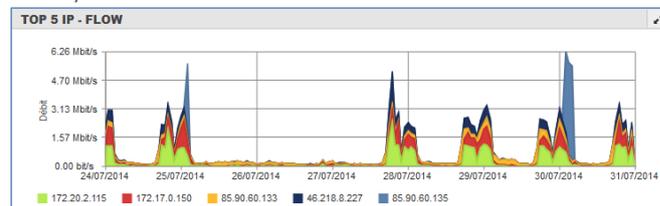


This feature doesn't need to get https data encryption key to have information and data at disposal regarding visited domains and sub-domains during queries.

Information is available regarding https business applications that are hosted in your DC or on one drive flows, office 365, through proxy or not, hosted in a tier's supplier DC (Google, Microsoft, Azur, ...)

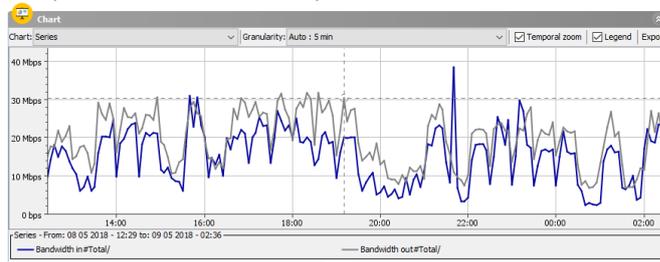
Check H5-Appliance® out

Identify the most talkative machines



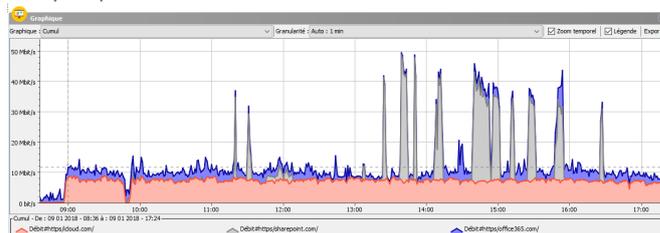
...in a comprehensive format for everyone

Analyze bandwidths of each of your links



...with the available temporal zoom with a 1-one-minute granularity for all monitored links.

Analyze specific flow traffic



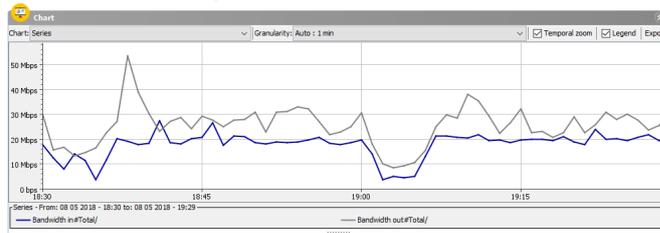
...which web application hold my bandwidth?

Follow all transactions with flows drill-down

Type	Description	Bandwidth	Bandwidth in	Bandwidth out	Volume	Volume in	Volume out	RTT in	RTT out	Fallu
HTTPS	HTTPS	15.72 Mbps	2.67 Mbps	13.05 Mbps	6.7 GB	1.14 GB	5.56 GB	9.48 ms	53.61 ms	
domtys.fr	domtys.fr	3.77 Mbps	488.52 Kbps	3.29 Mbps	1.61 GB	212.45 MB	1.4 GB	3.2 ms	67.17 ms	
office365.com	office365.com	1.92 Mbps	757.31 Kbps	1.16 Mbps	836.06 MB	330.42 MB	505.64 MB	18.34 ms	81.02 ms	
apple.com	apple.com	842.45 Kbps	97.72 Kbps	744.73 Kbps	367.57 MB	42.64 MB	324.93 MB	24.6 ms	28.14 ms	
microsoft.com	microsoft.com	641.85 Kbps	90.18 Kbps	551.67 Kbps	280.04 MB	39.35 MB	240.7 MB	19.74 ms	42.4 ms	
google.com	google.com	576.36 Kbps	110.97 Kbps	465.39 Kbps	251.47 MB	48.42 MB	203.05 MB	8.57 ms	23.55 ms	
real	real	289.34 Kbps	80.86 Kbps	208.37 Kbps	126.24 MB	35.33 MB	90.91 MB	2.44 ms	14.99 ms	
192.168.220.4	192.168.220.4	253.65 Kbps	72.52 Kbps	181.13 Kbps	110.67 MB	31.64 MB	79.03 MB	1 ms	16.07 ms	
192.168.225.5	192.168.225.5	12.76 Kbps	3.25 Kbps	9.51 Kbps	5.57 MB	1.42 MB	4.15 MB	0.43 ms	15.24 ms	
10.197.40.16	10.197.40.16	10.47 Kbps	1.11 Kbps	9.36 Kbps	4.57 MB	496.81 KB	4.08 MB	15.13 ms	4.56 ms	

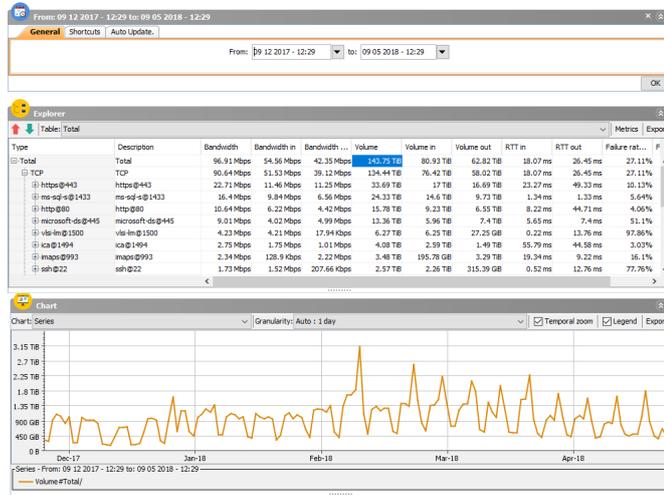
...what are the connected IPs in https?

Process real time diagnosis



...and zoom onto a specific period of your choice to get detailed information

Store all data for one month, 6 months or more if needed.



...or use temporal zoom to refresh and get to data history of a past period.

Engineers and Managers – Questions asked - Avoid unnecessary WAN costs

Planning infrastructure requirements

- Do you know all the applications that are on your network?
- How do you identify them?
- Do you know what the application traffic patterns are?
- How do you determine which applications and hosts are consuming bandwidth?
- Do you have any way to be alerted automatically when applications consume too much bandwidth?
- How do you plan for more link capacity based on traversing applications?
- When upgrading your links, have you ever learned after the fact that the investment in bandwidth did not solve a performance problem?

Responding to a new application roll-out

- Do you always know when new applications are going to be rolled out on the network or do you sometimes find out after the fact?
- Have you ever had an application rollout cause performance problem on your network?
- How long did you spend troubleshooting these problems?
- How many people were involved in the troubleshooting?

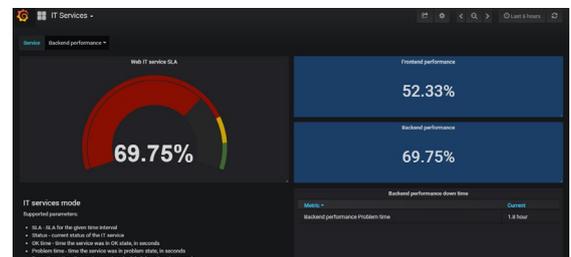
Planning a network upgrade

- Have you ever been asked to upgrade a network link to improve performance without knowing what traffic is on that link?
- Do you make link upgrade decisions based on utilization rates?
- Have you ever upgraded a link only to find it made little improvement to performance?
- Do you know what the composition of link traffic is?
- Is non-business-related traffic ever an issue?
- How do you know?

- How do you decide if a better alternative to an expensive upgrade would be to alter QoS policies, or to identify and remove unnecessary or unwanted traffic?

Optimize the network infrastructure for application Infrastructure planning

- What metrics do you currently use to justify network upgrades? How do you measure the effect of the upgrade?
- Have you ever invested in an upgrade that did not resolve user complaints?
- What part of the infrastructure was it?
- Do you believe you had the right data to make the decision?



Managing the impact of new applications on the network

- Do you have instances when application roll-outs caused performance bottlenecks?
- For example, VoIP or streaming video applications?
- How did you identify the bottlenecks?
- Have you ever had network problems that were caused by the roll-out of a new application without warning?
- How was the network affected?
- What about the performance of other critical applications?
- What did you do to resolve the problem?

Solve performance problems faster

Determining the severity of performance problems

- Do you know what normal behavior is for your applications?
- Are you notified when things are not normal? How?
- Do you know how this performance has changed over time?
- Do you have one place to see a snapshot of current application performance compared to past performance?
- Are you able to view and compare all of your important network performance metrics in a single report and compare them against historical norms?

Isolating the source of performance problems

- When there is an application performance problem, do people automatically blame the network?
- How frequently does this happen?
- About how many times per month do you have to get involved?
- Is there any finger pointing between different support groups and even between vendors?
- How long does it usually take to figure out whose problem it is?
- What do you have to do to prove it's not the network?