

TalkTalk

provides online protection for families

HomeSafe, the U.K.'s first and only network-level broadband security service provided by fixed broadband operator TalkTalk, is a parental control and anti-malware solution for all devices that use the home Internet connection – including PCs, tablets, smartphones, and even game consoles – putting parents in charge of what their children can visit online and when.

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Giving parents peace of mind

As the father of two young netizens in Great Britain, Mr. Smith knows that broadband is an integral part of family life but he does have concerns about his children being online. After they come home from school, they promptly start browsing the Internet and talking to friends online rather than doing their homework. He is also worried about them stumbling across inappropriate content. To ensure that their homework gets done, he even resorted to turning off the modem, but this also hindered his own Internet access.

Mr. Smith needs a flexible parental control service, one that can filter out the online junk food and ensure his children's studies. He also needs it to be user-friendly, as he doesn't have the time or the inclination to deal with a lot of jargon and configuration. A security suite would also be nice, one that can weed out viruses, malware, and other intrusions.

TalkTalk: The family operator

Since its founding in 2002, TalkTalk has steadily grown into the U.K.'s leading value provider of fixed broadband and voice telephony services,

servicing some five million customers. TalkTalk offers a clear and simple tariff structure, competitive prices, and innovative services. Examples include its £6.50 unlimited broadband & calls a month bundle and its superfast (up to 76Mbps) fiber broadband.

TalkTalk's customers are primarily households, where children are likely to be sharing the same Internet connection as their parents, and a lot of that time is unsupervised.

TalkTalk's own *Life Online* study has shown that about half of children's time online is unsupervised, and at least 14% of children aged 6-10 have encountered adult content on the Internet. Web attacks at home are also increasing. According to a Symantec report, the spam level in the U.K. in June 2012 was 67.2% and 1 in 210 emails was identified as malicious.

TalkTalk identified a need in the marketplace for a simple, effective security service for multiple device categories. They already offered a PC-based solution, provided by a third-party supplier and marketed as the *Super Safe Boost*, but given that the average TalkTalk home connects seven unique devices to the Internet a month, they realized that their customers needed a new kind of solution.

TalkTalk decided therefore to offer an alternative – a network-level security solution that simplifies operation & management (O&M) expenses while enhancing functionality. In late 2009, TalkTalk started its own research on safer broadband

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connections, and its efforts in this area have not ceased. In early 2010, TalkTalk partnered with Huawei to jointly develop a solution that provides safer broadband access for homes, with parental control as the key element.

Huawei SIG

Huawei provided its Service Intelligence Gateway (SIG) solution, which can be deployed on a fixed (between the broadband remote access server and international gateway), mobile (at the Gi, Pi, or ASN-GW egress), or converged network. Its architecture is simple, consisting of a front end, back end, upgrade center, and cloud security center.

The front end is responsible for analysis, reporting, and policy enforcement, while the back end manages SIG systems, users, and policies. The back end automatically receives the latest knowledge base and URL classification statistics from the upgrade center and cloud security center, without service interruption, while providing SOAP (Simple Object Access Protocol) interfaces to enable/disable services and configure policies. Based on its interfaces, service providers can develop self-service portals by themselves or through Huawei, while operators can use the SIG to deliver AoS (Alert of Security) messages to customers.

With its carrier-class router platform, Huawei SIG performance is assured through its ASIC

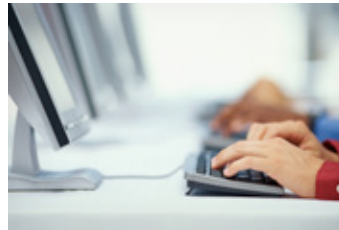
and multi-core network processors – service throughput can reach 120Gbps on fixed networks and 100Gbps for mobile. Reliability is another key feature, thanks to redundancy in SIG’s design for boards and key components, both on the front end and the back. The system is also equipped with professional-grade bypass devices, to protect links against anomalies. During upgrade, operators need only replace the interface or service board (overhaul is unnecessary).

Huawei’s SIG solution facilitates the launch of value-added services such as parental control. Through the operator’s portal, parents can subscribe to or cancel their service plans, and enable/disable/configure their online policy at will. Parents can also restrict access to online gaming and social networking sites at specified times of the day, helping to keep distractions during homework time to a more manageable level.

SIG boasts a library of over 65 million URLs in 43 categories, which operators can customize as required. Based on an industry-leading malicious code detection technology, SIG can filter malicious URLs dynamically, keeping viruses and other malware out of the home. If something is detected, the system can send alerts to users.

Great feedback

In May 2011, TalkTalk officially launched its *HomeSafe* solution (which integrates Huawei’s SIG



platform). TalkTalk provides three primary parental control/network security functions through *HomeSafe*. The first is dubbed *Kids Safe*, and allows parents to choose websites for blocking by category, including those devoted to dating, drugs, alcohol, file sharing, gambling, gaming, and pornography; blocked websites can also be self-defined by filling the web address in a box. *Homework Time* allows parents to set a timeframe during which children cannot access online gaming and social networking, while the last function, *Virus Alerts*, blocks access to infectious websites. All of these services are free of charge to TalkTalk customers. TalkTalk additionally offers a higher-level PC-based security service, dubbed *Super Safe Boost*, that is offered for £2 per month or free of charge as part of a higher-tier package.

As a satisfied TalkTalk customer, Mr. Smith can now log into his account and switch on *HomeSafe* in about a minute. He can then be confident that his children now have far fewer opportunities for online distraction, while other family members are able to benefit from improved safety online through various measures.

Since its launch in May 2011, *HomeSafe* has enjoyed positive feedback from children's charities, parents groups, and the British government. For example, Justine Roberts, co-founder of the U.K.-based Mumsnet, and the U.K. Children's Minister Tim Loughton have expressed their appreciation of *HomeSafe*. Tim Loughton praised TalkTalk for leading the way when it comes to Internet safety.

Liska, a popular parent blogger, has noted that "this really is a great product and is a breath of fresh air, to what is otherwise a very confusing industry for customers: that of online security."

HomeSafe is now a key differentiator in TalkTalk's service lineup, having made the operator the first in Great Britain to provide network-level broadband security as well as the first to support government efforts to provide what the U.K. government calls *active choice* where customers are prompted to set up parental controls when signing up for broadband. It has also helped the operator win two industry awards for innovation and network security.

With a claim to being the U.K.'s safest broadband connection, *HomeSafe* is gaining increased popularity among customers. Eight weeks after launch, it attracted over 100,000 customers and since TalkTalk introduced this active choice, roughly one in three new customers has chosen to use the parental controls. Less than a year and half after launch (May 9, 2012), *HomeSafe* users hit over 500,000, and this number is expected to reach one million by March 2013.

In Q4 2011, TalkTalk CTO Clive Dorsman granted the operator's *Smooth Delivery Award* to the Huawei SIG team, recognizing the vendor's efforts and professionalism in delivering the key element in *HomeSafe*. As a partner, Huawei is ready to strengthen its cooperation with TalkTalk in broadband security, as well as other fields of mutual interest. [www](#)