



## Reverse Auto-Provisioning: Reversing the Process of Subscriber Signup to Force Service Agreement Compliance

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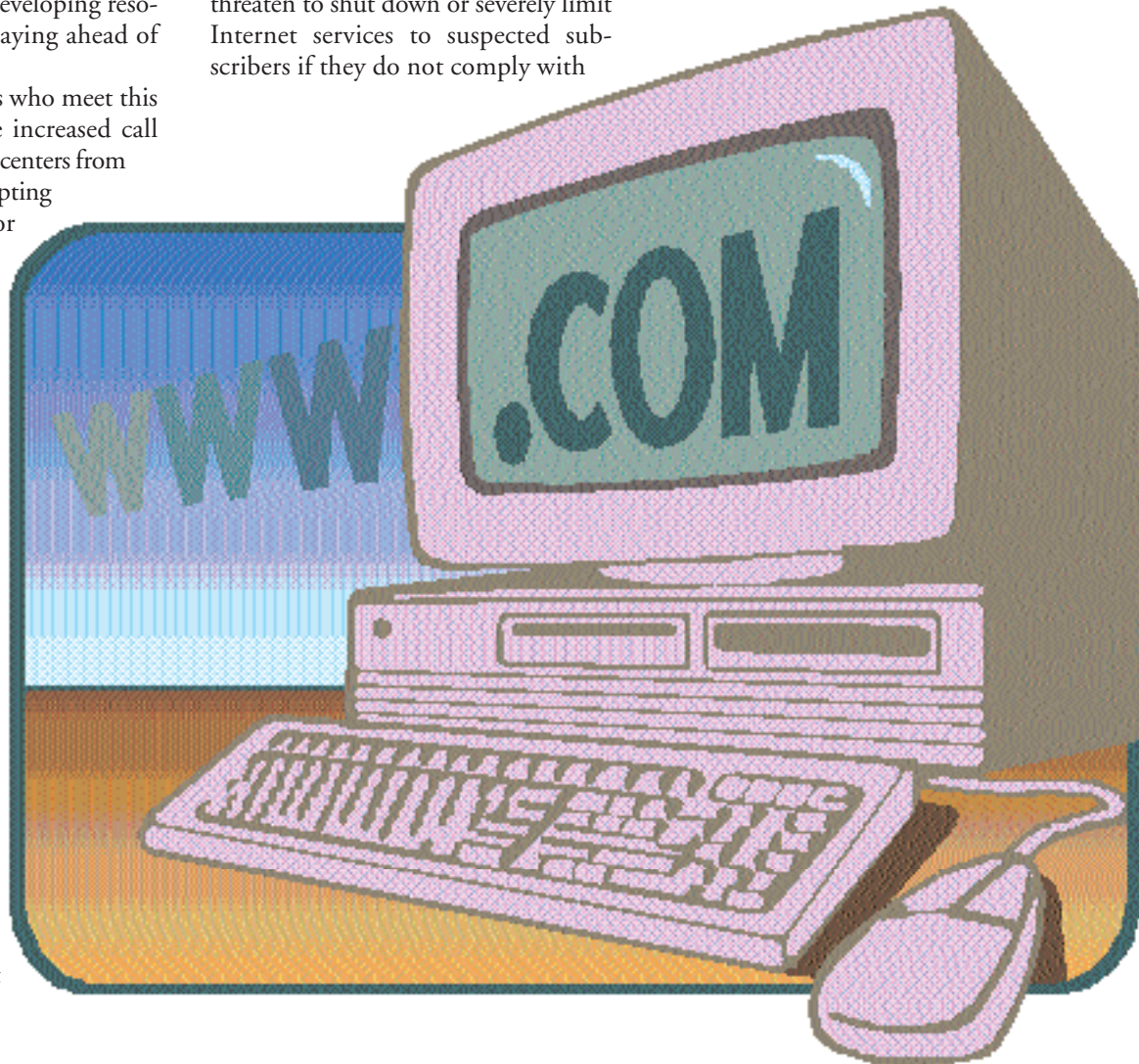
Today's Internet is host to countless different threats that seek to duplicate, infect, exploit, inhibit, or gain entry to unsuspecting subscribers' computers. Within this mix also lie subscribers or third-party individuals with unlawful temptations of seeking better or free service. Needless to say, this all adds up to an extremely complex task of record keeping and monitoring as well as developing resolution measures and staying ahead of the latest threat.

Broadband operators who meet this challenge head-on, see increased call volume in their support centers from either subscribers attempting to resolve their issues or subscribers complaining that the measures taken by the operator are impacting their lawful use of the service. This battle of keeping your Internet service free from harm all boils down to a matter of resource availability. How many resources can you throw at this problem in attempt to get your arms around keeping your subscribers safe from the Internet as well as safe from themselves? It is a problem that many broadband operators resort to just ignoring as it can easily be cost prohibitive to proactively look out

for and protect your subscribers.

More recently, one solution to this problem is gaining attention. The solution is called "Reverse Auto Provisioning" but it has been called many other names (i.e. quarantine, consumer firewall, virus control system, etc.). The solution basically allows broadband operators to locate these subscribers through the use of specialized scanners and then threaten to shut down or severely limit Internet services to suspected subscribers if they do not comply with

the conditions of the subscriber service agreement—particularly, the parts about not exploiting the service and not interfering with performance and perceived experience of other subscribers. If these singled out subscribers do not comply (i.e. voluntarily go to the self-repair website to correct their issues and achieve an "All Clear" status), they experience a "Reverse Auto Provisioning"



state that in many ways resembles their original operational state before signup.

Before the advent of Reverse Auto Provisioning, the threat by broadband operators to enforce their service policy and even cancel service was empty at best because the resources required to carryout that threat was cost prohibitive. However, with Reverse Auto Provisioning, broadband operators now have an effective weapon in the defense of misbehaving subscribers—even subscribers that have unintentionally acquired this capability. Because "Reverse Auto Provisioning" is automatic, broadband operators can institute and enforce increasingly complex service use policies without hiring an army of call center representatives to handle the increased call volume. Reverse Auto Provisioning can also implement other company policies such as automatically handling non-pays as well as addressing similar needs for other services (e.g. voice and video). The possibilities of the "Reverse Auto Provisioning" system are only limited by the technical resolve of the broadband operators' as well as the vision and innovativeness of its vendor community.

Auto provisioning is a means of providing an environment for prospective subscribers to signup for Internet services without requiring operator involvement. It is a way to take a raw/unknown subscriber and make them an official (paying) subscriber through a controlled signup process that takes place within a network restricted walled-garden. However, rather than attaining Internet access this system allows you to now take it away from subscribers in an attempt to forcefully motivate subscribers to correct their various issues via a self-repair website. A self-repair website that provides helpful intuitive instructions, customer friendly features, and offers significant hand holding and automated capabilities can effectively substitute for call center representatives for 1/200th the cost (source IT Consultancy Forrester Research who

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state a phone support call to cost \$12 as opposed to a web support instance costing only \$0.06). Combine this with the costs of resolving wide spread threats like the Code Red virus and the price for a Reverse Auto Provisioning system seems like a bargain—Code Red virus costs US businesses well over 2 billion in labor to repair infected systems (source IT World).

### **How to Evaluate Your "Reverse Auto Provisioning" Options**

Unfortunately, there is no such thing as a tried and true "Reverse Auto Provisioning" system one can buy from any one software vendor. Such software just

hasn't been adopted or deployed by a sufficient number of broadband operators to gain any kind of "Off-the-shelf" status. However, the components of a "Reverse Auto Provisioning" system can be built simple enough in-house or through the use of consultants. Any components that are not intuitive to build can be purchased. For example, a number of vendors today offer security scanners—the principle tool used to acquire the list of troubled subscribers. The rest of the components (self-repair website as well as the engine that processes subscriber list) are still highly specialized applications, as they need to be custom built to integrate with your

backend provisioning systems (which tend to be customer specific).

The security scanner application represents the most complex component, as it is essentially a moving target that must be regularly updated. The remaining components can remain relatively static if built with the proper flexibility. Broadband operators may want to seek scanning products from multiple vendors here as well as develop their own scanners for other "internally handled" issues—those that may negatively expose their service in the eyes of their customers or investors if details of such issues were publicly known.

Beware of end-to-end solutions, as

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they will likely come high priced and yet still require the same level of integration with your backend provisioning systems. These systems may also incorporate proprietary technology from other products within your network from that vendor. Purchasing such a system thus may limit your flexibility to be vendor agnostic and prevents you from selecting best of breed products to support your subscribers. It may even unknowingly tie you to that vendor's other product(s) to support this service.

The best way of attaining this capability really needs to capitalize on the existing back office infrastructure while inflicting the least amount of change to your organization's network – a most difficult requirement for off-the-shelf solutions. In absence of any standards there does seem to be a growing number of subject matter experts that can either provide guidance or build some or all of this function for you at a fraction of the cost of a more formal end-to-end solution.

Even if the only thing your Reverse Auto Provisioning system handles is non-pays, it would definitely pay for itself by reducing the call volume of your support center. It also offers a way for you to throw a life preserver to subscribers who may have otherwise become a churn statistic – perhaps even getting them to signup for automatic bill payment services. ■

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**About the Author**

*Birds-Eye Network Services specializes in products and services for a wide range of broadband companies. Lead by its founder, Bruce Bahlmann, Birds-Eye.Net offers market research, authoring, competitive custom development, and a growing array of network management diagnostic and reporting tools. Check us out at <http://www.birds-eye.net> or call/email us at 651-398-4679 or [info@birds-eye.net](mailto:info@birds-eye.net) respectively.*

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