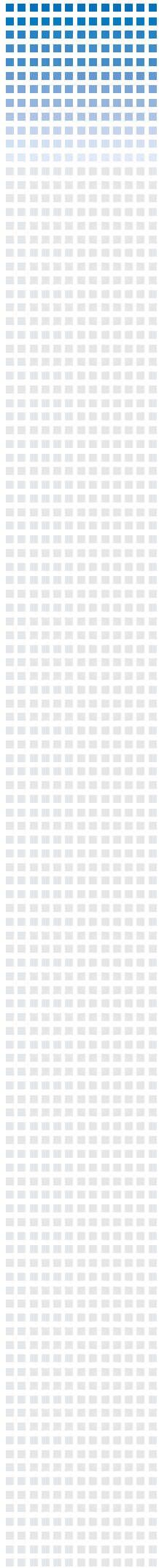


**AscenVision**  
**Success of AscenLink in**  
**the Backhaul**  
**Infrastructure of a**  
**Germany WISP**

AscenVision Technology Inc. The Intelligent Network Provider



## Executive Summary

Förderverein Bürgernetz Dresden e.V. delivers wireless internet services to the residents in rural areas of Dresden, Coswing, Radebeul, and Freital. Since a robust wireless network requires a constantly reliable and available fixed-line network as the backhaul infrastructure, Dresden deploys AscenLink, the world-class WAN load balancer, to aggregate multiple ADSL lines from disparate ISPs and achieve affordable ISP redundancy for maximum capacity and adequate failover mechanism. In addition to strengthening the backhaul, AscenLink also enables the MIS personnel to achieve optimal traffic management with the easy-to-use web-based user interface. Furthermore, AscenLink's high availability feature and virtual link support makes future network expansion rather easy, which saves lots of IT operational time and costs.

## Overview

Förderverein Bürgernetz Dresden e.V. (Dresden) provides wireless network services in the rural area where DSL lines are unable to be deployed. Totally 80 hotspots centered in Dresden and distributed in Coswig, Radebeul, and Freital need to serve thousands of concurrent users.

As a regional WISP with sound reputation for quality and trust, Dresden understands the significance to ensure high-speed connections and constant availability of their wireless Internet services. A robust and cost-effective fixed-line infrastructure, therefore, is critical to deliver quality wireless Internet access services.



## Challenge

In order to gain improved customer satisfaction and more business opportunities, Dresden has several primary requirements for the wireless backhaul infrastructure:

1. Achieve bandwidth expansion with multiple WAN links

Dresden deploys two 6-Mbit ADSL lines, one 16-Mbit ADSL line, and a 4.6-Mbit symmetric DSL line in the backhaul infrastructure, but they do not get an ideal accumulated bandwidth.

2. In case of specific link failure, need to route users to different WAN links and to avoid unavailable Internet service interruption.

They want to distribute traffic to multiple lines to increase the bandwidth usage and avoid congestion. Furthermore, Dresden needs an intelligent failover mechanism to ensure non-stop Internet connections for users even if one of the lines is temporarily unavailable.

3. Traffic management

They also want to have adequate control and management over the WAN traffic to improve network quality of services and avoid service interruption caused by traffic overload.

## AscenLink as the Solution

***“We have tested a variety of WAN load balancing devices and finally picked AscenLink because that it integrates all the features we need, plus many other useful functions, such as connection limit for security concern, and the core network services such DNS, DHCP, and so on,”*** said Mirko Kunath, the Head of Yellow-Computertechnik and the technical supervisor of Bürgernetz Dresden.

Dresden deploys an AscenLink 430 sitting between the WAN and the WLAN to aggregate two 6-Mbit ADSL lines, one 16-Mbit ADSL line, and a 4.6-Mbit symmetric DSL line for a more than 30-Mbit virtual uplink WAN connection (please refer to the topology in the next page).

The detailed deployment of AscenLink is as follows:

1. Direct traffic to different links and prevent service disruption from WAN link failure

AscenLink intelligently load balances both inbound and outbound traffic across all WAN links by setting proper policies in both the Multihoming and Auto Routing service sections. In addition, its fault tolerance feature automatically redirects traffic from the failed link to other healthy ones in the event of a WAN link failure.

2. WAN traffic management eliminates network congestion and achieves optimal performance

AscenLink’s “optimum route” feature automatically routes traffic to the most efficient WAN link for a certain user or user groups, IPs, and services. Furthermore, proper bandwidth management policies can reserve sufficient bandwidth for bandwidth-critical applications, such as VoIP or VIP users, which gives WISP flexibility on traffic management and bandwidth assignment to provide user-based value-add services.

### 3. Easy deployment and central management

AscenLink can be seamlessly integrated into the existing wireless backhaul infrastructure without any changes to the current configuration. In addition, the intuitive web-based user interface provides MIS personnel with a “drop-in” deployment and central management framework, making the installation and configuration extremely easy in the wireless network environment. Meanwhile, the SNMP support of AscenLink especially gains Mr. Mirko Kunath’s preference. He said “The SNMP monitoring of the AscenLink functions smoothly and efficiently. We are able to integrate the device into its internal monitoring system immediately.”

### 4. Comprehensive statistics and reports on the WAN traffic

AscenLink offers statistics and reporting tools enabling the MIS personnel to monitor the traffic and network condition in real-time, so that they can take immediate actions against the abnormality at the backhaul. With LinkReport, the companion tool of AscenLink, the MIS personnel can have a better understanding of the network health and make changes to configuration for maximum network performance.

### 5. Scalability for the future expansion

AscenLink 430 supports eight virtual WAN links, which enables Dresden to add more lines according to their bandwidth demands for growing number of hotspots and users in the future. Furthermore, AscenLink’s HA (High Availability) deployment enables Dresden to be a non-stop WISP even if the active AscenLink is down. The HA deployment makes use of one additional AscenLink with synchronized configuration, which will automatically and transparently take over the failed AscenLink’s job without any service disruption.



Bürgernetz Dresden WISP Topology



## Summary

AscenLink strengthens Dresden's wireless backhaul with its functionality, manageability, solid performance, transparent deployment, and so on, delivering high-speed wireless internet services for optimum user experiences.

Bürgernetz Dresden is very satisfied with AscenLink and the pre and post-sales technical supports and services provided.

**Mirko further stated, "We are amazed by AscenLink's solid performance in these months after the deployment. It withstands up to 1500 simultaneous users and an even higher number of concurrent connections without any problems. As we are now proposing more hotspots in more places, AscenLink will be our first and last choice of WAN traffic management devices."**

In addition to AscenLink's powerful features mentioned above, its extra benefits are:

### 1. High return on investment

AscenLink creates high price/performance ratio and saves lots of time and money on network administration and maintenance. Although it is hard to quantify the actual numbers of return, you can see apparent improvements on network performance and traffic management, sharply reduced number of help desk calls, and dramatic increase in revenue.

### 2. Greatly improved level of security

With connection limit and network attack defense module, AscenLink can effectively reduce the damage caused by DOS network attacks and virus attacks.

## About AscenVision

AscenVision Technology is a leading network device and solution provider, with the corporate goal to ascend the network technologies with a vision to provide intelligent network solution to the mass market. By applying these technologies, AscenVision designs and builds highly reliable and efficient network devices as network infrastructure building blocks to improve WAN traffic management, security, and performance.

For more information about AscenVision, please visit: <http://www.ascenvision.com/>