

RESIDENTIAL BUCKEYE EXPRESS™ HIGH SPEED INTERNET

BROADBAND INTERNET ACCESS SERVICE DISCLOSURES

Consistent with FCC regulations,¹ Buckeye provides this information about our broadband Internet access services. We welcome questions or comments about this information. You may contact us in person at 5566 Southwyck Boulevard, Toledo, Ohio 43614, or by phone at 419-724-9800.

NETWORK PRACTICES

General description. We continually monitor our network and traffic patterns and make changes we deem necessary to manage and improve overall network performance. Buckeye uses reasonable, nondiscriminatory, network management practices to improve overall network performance to ensure a high-quality online experience for all users. Our network management practices do not target any specific content, application, service, or device. As network management issues arise and as technology develops, we may employ additional or new network management practices. We will update these disclosures as necessary.

Related documents and disclosures. Use of our Buckeye Express service is also governed by:

- Buckeye Express Acceptable Use Policy, available at http://www.buckeyecablesystem.com/downloads/BEX_agreements/Acceptable%20Use%20Policy.pdf.
- Buckeye Express Residential Terms and Conditions of Service, available at http://www.buckeyecablesystem.com/downloads/BEX_agreements/Residential%20Terms%20and%20Conditions%20of%20Service.pdf.
- Buckeye Express Residential Product Definition, available at http://www.buckeyecablesystem.com/downloads/BEX_agreements/Residential%20Product%20Definition.pdf.
- Buckeye Express Minimum Equipment Requirements, available at http://www.buckeyecablesystem.com/downloads/BEX_agreements/Minimum%20Equipment%20Requirements.pdf.
- Websites and Subscriber Privacy, available at http://www.buckeyecablesystem.com/downloads/BEX_agreements/Websites%20and%20Subscriber%20Privacy.pdf.

These documents contain important information regarding Buckeye Express service and its use. We encourage you to read them.

Congestion Management. We describe in this section network management practices used to address congestion on our network.

Congestion management practices used.

Real-time “fair share” traffic management. Buckeye utilizes real-time monitoring and application/protocol agnostic means of maximizing performance for as many customers as possible by ensuring that each user has access to a fair share of the available bandwidth.

Types of traffic affected. All network traffic is potentially affected by this practice as congestion can occur anywhere at any time on Buckeye’s network.

¹ 47 CFR 8.3 and *In re: Preserving the Open Internet, Broadband Industry Practices, Report and Order*, 22 FCC Rcd 17905 (2010).

Purposes of congestion management practices. Buckeye's congestion management practices serve to moderate demands on the network by the highest bandwidth users during periods of peak network traffic. Buckeye's High Speed Internet network is a shared network. This means that our customers share upstream and downstream bandwidth with customers in their area. Although the available bandwidth is substantial, so is the demand. Thus, when a relatively small number of customers in an area place disproportionate demands on network resources, the resulting congestion can degrade their others' Internet experience. The goal of Buckeye's congestion management practices is to enable better network availability and speeds for all users.

Congestion management criteria. Our network management is performed in real time. Traffic intervention is triggered by network congestion, and ceases whenever the triggering network congestion is cleared. When a network segment's consumption reaches a high threshold (typically above 95%), flows for customers on that segment who are consuming the larger amounts of bandwidth are slowed down by injecting latency and dropping packets to provide a more even and ubiquitous distribution of the capacity of the network segment among all customers on that segment. This management is initially utilized only on flows that are not time-sensitive (for which a slight delay will not have a significantly adverse impact on the flow or on the customer's use of the network). Time-sensitive flows are only impacted if overall consumption on that specific network segment cannot be reduced to levels below the threshold by impacting only the non-time-sensitive traffic. Once consumption on this specific network segment drops below the threshold, all active management of flows on that segment cease.

Effects on end user experience. Our congestion management technique does not manage congestion based on the online activities, protocols or applications a customer uses; it only focuses on the heaviest users in real time, so the periods of congestion typically tend to be very fleeting and sporadic. It is important to note that the effect of this technique is temporary and it has nothing to do with a customer's aggregate monthly data usage. Rather, it is dynamic and based on prevailing network conditions as well as a customer's data usage over a very recent period of time. Large bandwidth users on the network segments targeted by Buckeye's congestion management techniques will potentially experience slower transmission speeds or reception rates for affected modems. In these circumstances, the actual end user experience will largely depend upon the particular application in use at the time.

Typical frequency of congestion. Network congestion occurs on some portion of our network on a daily basis. Congestion tends to occur during periods of peak demand for higher bandwidth applications. Our congestion management technique focuses on the heaviest users in real time, so the periods of congestion typically tend to be very fleeting and sporadic.

Application-Specific Practices. This section discloses any application-specific practices we use, as described below.

Management of specific protocols or protocol ports. All ports and protocols are subject to our management practices. However, the traffic is broadly categorized into time-sensitive and non-time-sensitive, based upon the impact the traffic intervention would have on the customer's online experience. As described below, to ensure network and end user security, we also may employ practices that affect specific protocols or ports.

Modification of protocol fields. Buckeye does not modify protocol fields.

Applications or classes of applications inhibited or favored. As described above, our congestion management practices are application and protocol agnostic.

Device Attachment Rules. This section addresses any limitations on attaching lawful devices to our network.

General restrictions on types of devices to connect to network. The computer in which the Service is installed must meet the minimum requirements set forth in Buckeye Express Minimum Equipment Requirements, available at http://www.buckeyecablesystem.com/downloads/BEX_agreements/Minimum%20Equipment%20Requirements.pdf

Customer-Owned Cable Modems. Specifically, we support only devices of the same make and model that Buckeye currently has deployed in its network. Only devices that have been fully certified by CableLabs as compliant with the DOCSIS 2.0 or DOCSIS 3.0 specifications may be used. A current list of supported modems is detailed below (list is subject to frequent change):

Arris model #s:

450	550	760	950	402
502	602	722	852	862
304	404	508	512	604
608	822	804		

Motorola model #s:

5100	5101
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Once operational on Buckeye's network, Buckeye will manage and update the firmware on the customer-owned devices in the same manner in which it maintains the firmware on Buckeye-owned devices

Network and End User Security. This section provides a general description of the practices we use to maintain security of our network and our users.

Practices used to ensure end user security, including triggering conditions.

SMTP traffic (mail clients): E-mail traffic (SMTP) directly from its Buckeye Express customers using dynamically-assigned IP addresses is allowed only through Buckeye's e-mail platform. This prevents SPAMMERS from exploiting these computers for relaying their illicit e-mail through them. While these customers may receive e-mail into a client (i.e. Outlook Express) via POP3, they may not send outbound mail through another server.

Infected messages: Buckeye employs industry standard virus scanning and prevention techniques on its e-mail platform for mail inbound from the public network. Should an e-mail message be found to contain a virus or other harmful content, the message will be deleted without notification given to either the sender or the intended recipient(s).

Practices used to ensure security of the network, including triggering conditions. Buckeye uses a variety of industry standard practices to protect our network from harmful attacks.

Traffic monitoring: Viruses, worms, Trojans, and other "malware" or "spyware" pose a significant threat to our network and users. In an effort to minimize these threats, Buckeye constantly monitors the activity and traffic patterns of its network. If we reasonably determine that originating traffic from a user is a form of harmful traffic, we will suppress the flow of some or all of the traffic from that user until we determine the harmful traffic has ceased or that the traffic is legitimate traffic.

Connection limits: Limiting the number of simultaneous connections for any modem during an online session. With a typical user having a dozen or so simultaneous connections for routine use, this limit provides a means of identifying and defending against malicious attempts to harm the network or other users. This limit is currently set at 1,500 - well above the number of connections used by typical customer.

PERFORMANCE CHARACTERISTICS

General Service Description. Our Buckeye Express service includes wiring, a cable modem and a network interface card (NIC) for the personal computer, if required. Through the Service, Buckeye serves as a local Internet service provider (ISP). The Service enables residential and commercial subscribers to access all lawful content, applications, and services of their choice available on the Internet.

Service technology. We deliver our Buckeye Express over our hybrid fiber-coaxial (HFC) network using the Data Over Cable Service Interface Specification (DOCSIS). Service is provided using a Cable Modem Termination System (CMTS), hardware in Buckeye's local cable network that acts as a gateway to the Internet for cable modems located at the customer premise. Cable modems in turn are used to access the Buckeye High Speed Internet network. This is a shared network, which means that our customers share upstream and downstream bandwidth.

Expected and Actual Speeds and Latency.

Expected performance. Buckeye provides residential customers with a variety of high speed Internet plans from which to choose, ranging from our Buckeye Express Basic (with download speeds up to 800 kilobits per second (kbps), and upload speeds up to 100 kbps to our Buckeye Express "50" (with download speeds up to 50 megabits per second (mbps), and upload speeds of up to 3 mbps). A complete description of the "up to" transfer speeds provided with each specific product offering is defined in a separate document entitled "Buckeye Express High Speed Internet Service Residential Product Definition," available at http://www.buckeyecablesystem.com/downloads/BEX_agreements/Residential%20Product%20Definition.pdf

Speed. Buckeye provisions its customers' modems and engineers its network to ensure that its customers can enjoy the speeds to which they subscribe. However, Buckeye does not guarantee that a customer will actually achieve those speeds at all times. Without purchasing an expensive, dedicated Internet connection, no ISP can guarantee a particular speed at all times to customer. Buckeye advertises its speeds up to a maximum level based on the tier of service to which a customer subscribes. Accordingly, the speeds advertised for Buckeye's high speed Internet access service describe the maximum upload and download speeds that subscribers are likely to experience.

Latency. Latency is another measurement of Internet performance. Latency is the time delay in transmitting or receiving packets on a network. Latency is primarily a function of the distance between two points of transmission, but also can be affected by the quality of the network or networks used in transmission. Latency is typically measured in milliseconds, and generally has

no significant impact on typical everyday Internet usage. As latency varies based on any number of factors, most importantly the distance between a customer's computer and the ultimate Internet destination (as well as the number and variety of networks your packets cross), it is not possible to provide customers with a single figure that will define latency as part of a user experience.

Actual speed and latency performance. Actual speed performance in terms of speed and latency may vary depending upon network conditions and other factors. For example, experienced broadband performance may be affected by the capabilities and limitations of the consumer's own computer or local area network ("LAN") devices such as home WiFi routers, or by the performance of content and applications providers the consumer is accessing. Actual performance of Buckeye's High Speed Internet Service in most cases will conform to national wireline broadband Internet speed and latency levels reported by the FCC.² The FCC has reported that customers of coaxial cable-based broadband Internet services receive mean download speeds that are within 93% of advertised speeds during non-peak hours, and 85.7% of advertised speeds during peak hours.³ In addition, the FCC has reported that these same customers experience average latency⁴ delays of 28 milliseconds, increasing by an average of 30 milliseconds during peak hours.

Customer Speed Test. Buckeye provides an online speed test for its Buckeye Express customers, available at: <http://www.st.bex.net>.

Suitability of the Service for Real-time Applications. Our Buckeye Express service is suitable for typical real-time applications including messaging, voice applications, video chat applications, gaming, streaming media. If users or developers have questions about particular real-time applications, please contact us in person at 5566 Southwyck Boulevard, Toledo, Ohio 43614 or by phone at 419-724-9800.

Specialized Services.

Specialized services offered to end users. Buckeye offers several managed services over its broadband cable network, sharing network capacity with its high speed Internet services, including voice over Internet Protocol (VoIP).

Effects of specialized services on availability and performance of broadband Internet access service. The offering of these services has no effect on the availability and performance of our Buckeye Express service.

² See FCC's Office of Engineering and Technology and Consumer Affairs Bureau, *Measuring Broadband, A Report on Consumer Wireline Broadband Performance* in the U.S., OET CGB DOC-308828A1, pp. 4-6 (Aug. 2, 2011) (available at: http://transition.fcc.gov/cgb/measuringbroadbandreport/Measuring_U.S. - Main_Report_Full.pdf).

³ The FCC has defined peak hours measured during "busy hour" as weeknights between 7:00 pm and 11:00 pm local time.

⁴ The FCC has defined latency is the total length of time it takes a signal to travel from an origination point to the nearest server, plus the time for an acknowledgement of receipt to travel back to the origination point. The nearest server is the server providing the minimum round trip time.

COMMERCIAL TERMS

Prices. Monthly prices for our Buckeye Express service are available at <http://www.buckeyecablesystem.com/express/index.html>.

Fees for early termination. Buckeye does not charge early termination fees.

Fees for additional network services. Buckeye offers additional public IP addresses and static IP addresses for an extra charge. Charges for these additional network services may be found at <http://www.buckeyecablesystem.com/2011rates/index.html>.

Privacy Policies.

Inspection of network traffic. Buckeye routinely monitors its network and traffic patterns.

Traffic monitoring: Viruses, worms, Trojans, and other “malware” or “spyware” pose a significant threat to the uninhibited and beneficial access to the resources on the Internet. One of the more prevalent forms of such disruptions is found in infections from viruses and worms perpetrated by SPAMMERS for the sole purpose of using unsuspecting Internet users’ computers to send out their illicit e-mail. In an effort to minimize the impact of this type of infection, Buckeye constantly monitors the activity and traffic patterns of its network.

Infected messages: Buckeye employs industry standard virus scanning and prevention techniques on its e-mail platform for mail inbound from the public network.

Storage of network traffic information. Buckeye stores broad categories of network traffic information (e.g., web browsing, email, entertainment) and makes available to its customers periodic graphic representations of their network traffic patterns by category over time. Buckeye provides a link for customers on its website to monitor their usage: <https://myaccount.buckeye-express.com/userlogin.cfm?process=11030968989>. The data generated on each customer’s usage is divided into broad categories for analysis to help Buckeye monitor and predict trends in usage for our customers as a whole.

Provision of network traffic information to third parties. Buckeye provides the broad categories of network traffic information on an anonymized basis to CableLabs for the purpose of aiding Buckeye in analyzing usage trends and bandwidth management and provisioning.

Use of network traffic information for non-network management purposes. Buckeye does not use network traffic information for non-network management purposes.

Website and Subscriber Privacy. Buckeye collects and stores information from many sources as it relates to providing and maintaining service to its customers. As a general rule, this data is only used directly in support of its products and services. Personally identifiable information is only disclosed outside of Buckeye under compulsion of law.

More details about our privacy practices can be found at:

http://www.buckeyecablesystem.com/downloads/BEX_agreements/Websites%20and%20Subscriber%20Privacy.pdf.

Redress Options. Buckeye welcomes questions about its Buckeye Express service. Buckeye publishes company contact information to the public at large, including edge providers, on its website, available at http://www.buckeyecablesystem.com/bci_html/contact.html. This section discloses redress options for end-users and edge providers. For all complaints, we will provide an initial response within 15 business days of receipt. We will attempt to resolve complaints informally, escalating the matter to senior management if needed.

End-user complaints and questions: Buckeye provides Buckeye Express customers multiple means of resolving complaints and submitting questions to the company. Buckeye Express customers are provided customer contact information on the website http://www.buckeyecablesystem.com/bci_html/contact.html. Customers may contact Buckeye concerning their service via Internet chat or by telephone. Buckeye employees are available on a 24/7 basis to answer questions and address complaints. Customers also may reach Buckeye employees via in-bound email and messages are responded to promptly. In addition, once each year, Buckeye owners and senior executives encourage customer contact by sending subscribers their office and personal telephone numbers.

Edge provider complaints and questions: Buckeye publishes company contact information to the public at large, including edge providers, on its website, available at http://www.buckeyecablesystem.com/bci_html/contact.html. Edge providers may also contact Buckeye via the contact information maintained by the American Registry for Internet Numbering (“ARIN”) with questions concerning Buckeye’s high speed Internet access service. Or, contact may be initiated through Penny Perrine by phone at 419-724-7220 or via email at pperrine@cablesystem.com.