

Verizon New England Inc.

4. INFOPATH® Packet Switching Service

4.1 General

INFOPATH® Packet Switching Service is furnished on existing installations only. Additions, rearrangements and moves of service are not permitted.

Rates and charges for services explained herein are contained in Part M, Section 3. Service charges referred to herein are explained in Part A, Section 3 and contained in Part M, Section 1.

4.1.1	Definitions
	Access Concentrator (AC) —The network equipment which collects customer data information from many access lines, multiplexes the data onto trunks for delivery to the packet switch and vice versa. The access concentrator improves the efficiency of a communications circuit by combining a number of low speed inputs into a single, higher speed output.
	Asynchronous —A form of communications whereby each data character is individually synchronized by means of start and stop elements.
	Bursty Traffic —Communications traffic characterized by short periods of high intensity separated by fairly long intervals of little or no utilization.
	Call Request Packet —The first packet in each session which contains the call request information.
	Data Circuit Terminating Equipment (DCE) —Verizon network channel terminating equipment that interfaces with customer provided data terminal equipment.
	Data Terminal Equipment (DTE) —Customer provided equipment, either terminals or computers, that interfaces with the Infopath packet switching service network.
	Kilopacket —One thousand packets.
	Logical Channel —A virtual communications channel through the network that allows simultaneous transmission of sequenced data packets through the network.
	Octet —A continuous sequence of eight binary digits of information.
	Packet —A continuous sequence of octets of information which is switched through the network as an integral unit. A packet can contain up to 256 octets of customer data as well as transmission and error control information. For billing purposes, a packet contains up to 128 octets.
	Packet Switch —The component of the packet switching network which performs the routing and switching functions.
	Permanent Virtual Circuit —A circuit which is the electronic equivalent of a private line between two destination network addresses.
	Port Connection —A communications interface provided by Verizon through which the customer or an authorized user is connected to the network.
	Protocol —A set of rules and procedures that permit the orderly exchange of information within and across a network.

Verizon New England Inc.

4. INFOPATH® Packet Switching Service

4.1 General

4.1.1 Definitions

Switched Virtual Circuit—A communications channel (logical channel) established on a switched basis as a result of the call establishment procedure via one network address calling another network address. The communications channel exists until the call is terminated by either the calling or called party.

Synchronous—A form of communications where characters or bits are sent in a continuous stream, with the beginning of one continuous with the end of the preceding one. Separation of one from another requires the receiver to maintain synchronization of a master timing signal.

Throughput—The amount of information that can be moved through a port connection to and from a customer's computer or terminal during a specified time interval. High throughput occurs at transmission rates of 9.6 or 56 kbps. Low to medium throughput occurs at transmission rates of up to 9.6 kbps.

Virtual Circuit—A logical channel established as a result of the call establishment procedure to a network address that exists for a period of time until either end of the circuit initiates the call clearing procedures.

X.25 Protocol—An international protocol that defines the interface between the customer's equipment and a public packet network data circuit terminating equipment for public packet switched networks. It is a reference to the section of the published international recommendations established by the International Telephone and Telegraph Consultative Committee (CCITT) where this particular type of protocol generally monitors electrical interface, error checking, etc.

X.75 Protocol—An international protocol that defines the interface between public packet network data networks. The X.75 protocol is also a reference to the section of the published international recommendations established by the International Telephone and Telegraph Consultative Committee (CCITT).

4.1.2 Description

- | | |
|-----------|--|
| A. | Infopath provides synchronous and asynchronous network transport of data through the network which usually involves relatively short bursts of data. The data are separated into discrete segments called packets for high speed transmission through the network. All packets are interleaved (statistically multiplexed) on the facilities as they are transmitted. These packets may contain up to 256 characters of data. |
| 1. | Asynchronous transmission is a form of communications whereby each data character is individually synchronized by means of start and stop elements. Asynchronous service supports start stop mode operation with ASCII codes at speeds up to 9.6 kbps. With asynchronous access, the access concentrator will perform a built in Packet Assembler/Disassembler (PAD) function to convert the data into packets utilizing a common protocol (X.25) and route them through the network to the specified destination. |

Verizon New England Inc.

4. INFOPATH® Packet Switching Service**4.1 General**

4.1.2	Description
B.	Routing and control information (packet header) is automatically inserted at the beginning of each packet, and error detection information (packet trailer) is automatically inserted at the end of each packet. Complete with this information, the entire packet is routed through the network to its intended destination.
1.	Error checking is performed on each packet as it is transmitted through the network. If a packet and/or format error is detected, the sending equipment is automatically instructed to retransmit the message. A message may consist of a single packet or multiple packets.
C.	The major components of the packet network are Access Concentrators (AC) which perform the interfacing and concentration functions (statistical multiplexing), the packet switch which performs switching, routing and interfacing functions, and, the network facilities.
D.	Infopath will be furnished only when the customer has subscribed to an adequate number of port connections or logical channels as established by Verizon to accommodate the service requested, (i.e., originating, terminating or two-way calling) without impairing the network.
E.	Infopath is provided where suitable facilities are available.

4.1.3	Service Options
A.	Various options permit customers flexibility in specifying how they operate on the network. These options are Switched Virtual Circuit service and Permanent Virtual Circuit service. In addition, optional features are available which expand customer capabilities on the Infopath service network. Switched and permanent virtual circuits may be designated as one-way incoming, one-way outgoing, or two-way.
1.	Additional restrictions may be placed on the circuits to allow DTE to place calls only to predesignated DTE or to receive calls only from predesignated DTE or to restrict both the origination and termination of calls.
a.	Switched Virtual Circuit (SVC) service is a standard Infopath service and utilizes a temporary switched data connection which permits an end user to establish a call to another point on the network.
b.	Permanent Virtual Circuit (PVC) service is an optional type of Infopath service. It provides the customer with the electronic equivalent of a private line between two points. At the time of subscription to this form of service, a virtual circuit is established between two specific customer locations which are connected to the network. While no physical circuits are dedicated, the two locations are electronically connected together.

Verizon New England Inc.

4. INFOPATH® Packet Switching Service

4.1 General

4.1.3 Service Options	
B.	Closed User Groups — The customer has the option of establishing Closed User Groups which permit the customer to arrange a subnetwork within the public packet switching network. This option provides for communications only between predesignated terminals on the network.
C.	The packet switching network may be accessed through either an access concentrator or a packet switch. Customers with low to medium throughput transmission requirements will access the packet switching network through the access concentrator at data rates of up to 9.6 kbps. Customers with high throughput transmission requirements will access the packet switching network through the packet switch at data rates of 9.6 or 56 kbps.

4.1.4 Service Components—Synchronous	
A.	The service components which apply to synchronous Infopath are port connections, network usage, and optional features.
1.	Port Connections — Each port connection comes with one logical channel. The two types of port connections are access concentrator port connections, and packet switch port connections.
a.	Access Concentrator Port Connection (Low to Medium Throughput) provides the customer with dedicated access to a port on the access concentrator at transmission speeds of up to 9.6 kbps using Digipath Digital service II, DovPath* or Type 3002 private line channels. This type of connection has both originating and terminating capabilities using X.25 protocol. The X.25 protocol provides the capability of establishing multiple virtual communication links from the customer's premises through the packet switching network. The maximum number of logical channels available is 32 per port.
b.	Packet Switch Port Connection (High Throughput) is available through Private Line Type 3002, DDS, or DDSII channels, to provide a direct connection between a customer's premises and a port on the packet switch. This arrangement supports transmission speeds of 9.6 or 56 kbps. The packet switch port connection has the capability of establishing multiple communication links from the customer's premises through the packet switching network and is available with either X.25 or X.75 protocol. The X.25 and X.75 protocols provide the capability of establishing multiple virtual communication links from the customer's premises through the packet switching network. The maximum number of logical channels available is 127 per port at 9.6 kbps and 511 channels per port at 56 kbps.

* As of October 31, 2014, DOVPATH® Service is no longer available to new customers. Existing customers may maintain their services, and moves, adds or changes to subscribers' existing services are permissible.

Verizon New England Inc.

4. INFOPATH® Packet Switching Service**4.1 General**

4.1.4 Service Components—Synchronous	
A. (Continued)	
2.	Network Usage on the Infopath packet switching network is comprised of call set-up, packet transport, transaction, or per minute. Usage charges may be billed to the originator or receiver of packets, as arranged for on each call. Packet switching network usage is aggregated per billing month. When more than 2,500 Kilopackets are transmitted in a billing month, rates are discounted. Call detail is provided as a chargeable optional feature.
a.	Call Setup initiates a request on a switched virtual circuit for the establishment of a virtual channel for the duration of the call.
b.	Packet Transport provides for the routing of packets over the packet switching network. Usage charges are based on the number packet transmitted (either sent or received while the call is on the Infopath service network). The minimum unit of billing is a kilopacket.
c.	Transaction— A billing arrangement with point of sale applications, where customers have a need to transfer small amounts of data many times a day, (e.g., credit verifications). A transaction is defined as ten packets or fraction thereof.
d.	Per Minute— The duration of each call is recorded in minutes and seconds and rounded to the nearest minute at the end of the month.
3.	Optional Features provide the customer with additional capabilities for interaction with the Infopath service packet switching network and should be selected by the customer at the time of subscription.
a.	Abbreviated Addressing allows the customer to specify an alphanumeric code of up to 16 characters that can be used in place of a data telephone number for easier end user access.
b.	Additional Logical Channel allows the customer to simultaneously operate multiple channels on a single port.
c.	Call Detail provides for printed detail of each call billed to the customer for use of the Infopath service packet switching network. This option is available on either a continuous monthly basis or on a per request basis.
d.	Call Rerouting is a data call forwarding capability that allows the customer to predefine one alternate destination to which calls will be rerouted in the event of a failure or busy condition at the primary destination.
e.	Closed User Group allows the customer to establish a subnetwork among a restricted number of other users within the Infopath service packet switching network who can communicate privately with each other. Members of the closed user group may be designated as having incoming, outgoing, or restricted access.

Verizon New England Inc.

4. INFOPATH® Packet Switching Service**4.1 General****4.1.4 Service Components–Synchronous****A.** (Continued)

- f. Multiple Network Address** allows a customer to subscribe to additional data terminal numbers in groups of ten. These numbers can be used with existing packet network connections and allow messages to be delivered to the customer's pre-specified destinations.
- g. Permanent Virtual Circuit** is a circuit which is the electronic equivalent of a dedicated private line between two destination network addresses.

4.1.5 Service Components–Asynchronous

- A.** The service components which apply to asynchronous Infopath are access concentrator port connections, network usage, and optional features.
 - 1. Access Concentrator Port Connections** include public dial in access, private dial in access, private dial out access and dedicated access.
 - a. Public Dial In Access** for originating calls only, is initiated by dialing an Infopath packet switching service network number via an exchange line. Applicable local usage and toll charges apply for each completed call to the Infopath packet switching service network access number. Public dial in access supports asynchronous protocol and transmission speeds of up to 9.6 kbps. A Network User Identification (NUI) code may be required for log-on to the network.
 - b. Private Dial In Access** is the same as the public dial in access port connection except that it is dedicated to one customer and supports transmission speeds of up to 9.6 kbps. Private dial in access is initiated via a line which connects the end user to the central office circuit switch; the line may be any type which has dial up network exchange capability, excluding Centrex and Feature Group A (FGA)*, is required to provide the customer who subscribes to the private dial in port with a connection from the central office circuit switch to the access concentrator. The customer who subscribes to the private dial in port will be billed for the additional line.
 - c. Private Dial Out Access** enables a customer who already has access into Infopath, to place a call out of an access concentrator to a destination on the circuit switched network. This port connection is dedicated to one customer and supports transmission speeds up to 2.4 kbps. A separate business line, as specified for the private dial in port connections is required to connect the central office circuit switch to the access concentrator. The customer is responsible for all appropriate charges that apply to the exchange line as well as for charges that apply to the outgoing call.
 - d. Dedicated Access Port Connection** provides dedicated access from a customer's premises to a port on the access concentrator at transmission speeds of up to 9.6 kbps using Private Line Type 3002 channels for intraexchange and interexchange channels.

* Effective February 13, 2026, this service is no longer available to new customers. Moves, changes or modifications to this service will no longer be supported. Service modifications for customers with existing contracts are subject to the terms of their contracts. For wire centers specific service withdrawal information, please refer to Part J, Section 1, of this Product Guide.

(C)
|
|
(C)

Verizon New England Inc.

4. INFOPATH® Packet Switching Service
4.1 General

4.1.5 Service Components–Asynchronous	
A.	(Continued)
2.	Network Usage for asynchronous service is the same as for synchronous service (refer to Section 4.1.4).
a.	Network User Interface (NUI) Code is an alphanumeric code which identifies the user to the Infopath network.
b.	Autoconnect— A subscriber may specify a frequently called address whose connection would be automatically made when a specific NUI is entered. The Information Provider (IP) may request the auto connect type NUI to provide to their subscribers or the end user NUI is prearranged to activate the autoconnect feature.
c.	Closed User Group
d.	Permanent Virtual Circuit
e.	Call Detail
f.	Call Rerouting

Verizon New England Inc.

4. INFOPATH® Packet Switching Service

4.2 Responsibility of Verizon

4.2.1	Cancellation
--------------	---------------------

- | | |
|-----------|--|
| A. | When an application for service is cancelled or changed in whole or in part by, or on behalf of the applicant prior to completion of construction and installation, the general terms and conditions contained in Part A, Section 1 apply. |
|-----------|--|

4.2.2	Interruption of Service
--------------	--------------------------------

- | | |
|-----------|---|
| A. | For any complete failure of an Infopath service port which continues for more than 24 hours, credit will be applied according to Part A, Section 1. |
|-----------|---|

4.2.3	Suspension of Service
--------------	------------------------------

- | | |
|-----------|---|
| A. | Infopath is not subject to a temporary suspension of service. |
|-----------|---|

Verizon New England Inc.

4. INFOPATH® Packet Switching Service
4.3 Responsibility of the Customer

4.3.1 Data Terminal Equipment

- | | |
|-----------|---|
| A. | Customers must provide DTE in conformance with the interface specifications as described in NTR-74250 (X.25 Protocol), TR-NPL-000065 (X.75 Protocol) and NTR-74252 (Asynchronous Protocol). |
|-----------|---|

Verizon New England Inc.

4. INFOPATH® Packet Switching Service

4.4 Terms and conditions

4.4.1 Minimum Period	
A.	The minimum period for which service is furnished and for which charges are applicable is one month.
1.	The charges for a fractional part of a month which follows and is consecutive with a full month will be a proportionate part of the monthly charge using the same ratio that the actual number of days service is furnished bears to 30 days.

4.4.2 Special Construction	
A.	The terms and conditions specified in Part A, Section 2 for the construction of facilities are applicable.

4.4.3 Application of Rates and Charges	
A.	Infopath Packet Switching - Synchronous 1. Central Office Interface— Rates and charges apply for each interface. a. For interface option changes, service charges apply. 2. Packet Switch Port Connections—High Throughput— Rates and charges include central office equipment at the packet switch and appropriate interface arrangements. In addition, the service requires a facility as described in Section 4.1.4. a. Rates and charges for Private Line Type 3002 channels and DDS, DDSII or DovPath*, apply, as appropriate, for each channel connected to a packet switch. 3. Access Concentrator Port Connections—Low to Medium Throughput— Rates and charges include central office equipment at the access concentrator. In addition, the service requires a Private Line Type 3002 channel or a point to serving wire center arrangement (i.e., DovPath* or DDSII), as appropriate and a central office interface. a. Rates and charges for Private Line Type 3002 channels and for DDS, DDSII or DovPath*, apply, as appropriate, for each channel connected to an access concentrator.
B.	Infopath Packet Switching- Asynchronous 1. Access Concentrator Port Connection— Rates and charges are dependent upon the type of port connection access selected by the customer. a. In addition, the service requires a Private Line Type 3002 channel from the customer's location to the access concentrator and a central office interface.

* As of October 31, 2014, DOVPATH® Service is no longer available to new customers. Existing customers may maintain their services, and moves, adds or changes to subscribers' existing services are permissible.

Verizon New England Inc.

4. INFOPATH® Packet Switching Service

4.4 Terms and conditions

4.4.3 Application of Rates and Charges	
C.	Network Usage— Charges for synchronous and asynchronous service are based on calls originated to the network addresses in the serving area. A charge applies for packets transmitted during virtual connection. Packets are accumulated and billed on a monthly basis. Transaction rates are billed per transaction, up to ten packets. Under transaction, holding time, and kilopackets do not apply. Per minute usage is billed on a per minute basis, holding time, and kilopackets do not apply. With Asynchronous service an additional service usage charge applies when access to the Infopath service network is via public dial.
1.	Packet transport data packet rates are time of day sensitive. The time of day periods are as follows.
a.	Day—8AM–5PM
b.	Evening—5PM–11PM
c.	Night—11PM–8AM
D.	Optional Features— When installed subsequent to initial Infopath service, optional features are subject to nonrecurring charges. When optional features are requested subsequent to the initial Infopath service order, one or more optional features per port may be included, per service order, for the one nonrecurring charge. A nonrecurring charge is not applicable when optional features are ordered in conjunction with the initial Infopath service.
1.	Call Detail may also be provided on a per request basis at the same rate as the monthly rate.
E.	Software Changes— When software changes are requested subsequent to the initial Infopath service order, one or more software changes per port may be included, per service order for the one nonrecurring charge. A nonrecurring charge is not applicable when software changes are ordered in conjunction with the initial Infopath service.
F.	Service Charges apply as appropriate, and are in addition to the rates and charges for services specified herein.
G.	Move and Change— Service charges apply.
H.	The Feature based Payment Option (FPO) is an optional method of payment for customers who commit to a minimum or equivalent of 2,500 kilopackets of usage per month.