CenturyLink Service Guide

Utility Backup & Vaulting 1.0

This CenturyLink Service Guide (SG) sets forth a description of Utility Backup and Vaulting 1.0 Services (Service) offerings by CenturyLink, including technical details and additional requirements, if any. This SG is subject to and incorporated into the Agreement and Service Schedule between the parties. The specific details of the Service ordered by Customer will be set forth on the relevant Service Order. For avoidance of doubt, any references in the Agreement, Schedules, or Service Orders to SSG, shall mean SG.

Version	Previous	Section Modified	Date
HOS-20180605-SG-UtilityBackupVaulting	HOS-20141008-SG-UtilityBackupVaulting	ALL	June 5, 2018

Table of Contents

Service Description

1. **Standard Service Description:** Utility Backup and Vaulting 1.0 (the "Service") is a Managed Hosting service that is no longer available for new Customer installations effective December 31, 2014. The Service will be discontinued from CenturyLink support on December 31, 2018. As part of the standard Service CenturyLink provides the infrastructure, storage resources and management for the elements listed in Section 1.1. The Service can be self-managed if added to a colocation environment or a CenturyLink managed environment in a Managed Hosting data center. Customer chooses the pricing model that fits their business operation. See Appendix A Pricing and Appendix B Exceptions for additional information. The Service Level Agreement (SLA) associated with this Service Guide is the CenturyLink Utility Backup and Vaulting SLA.

    1.1. **Elements:** The following are included as part of the standard Service. Customer can choose one or more of the items:

    1.1.1. **Utility Backup 1.0:** Utility Backup includes data backup and restore on demand, utilizing high capacity and high availability tape libraries. See Table 2.0 Utility Backup Features for additional information. Utility Backup cannot be purchased to back up data accessed through CenturyLink NAS Connect.

    1.1.2. **Utility Backup Encryption 1.0:** Utility Backup Encryption provides the same services as Utility Backup with the addition of data encryption throughout the lifecycle of the data. See Table 3.0 Utility Backup Encryption Features for additional information. Utility Backup Encryption cannot be purchased to back up data accessed through CenturyLink NAS Connect.

    1.1.3. **Utility Backup NAS 1.0:** Utility Backup NAS provides similar services to Utility Backup, utilizing technologies (such as NDMP) designed specifically for NAS-based data. Utility Backup NAS service includes all the features of Utility Backup listed above, in addition to the features listed in Table 4.0 Utility Backup NAS Features. Customers with more than 5 TB of monthly backup usage may require platform migration and will receive 30 days' notice prior to migration in order to schedule maintenance window. Utility Backup NAS cannot be combined with Utility Backup Encryption or any application-based agent (Oracle, Exchange, SQL, etc.). Available Backup Options for NAS only are located in Table 5.0 Backup Options.

    1.1.4. **Utility Vaulting 1.0:** Utility Vaulting includes retention, data management and rotation of data to off-site secure data archiving facilities. Service is only available to Customers whose backups are managed by CenturyLink. Utility Vaulting Features are located in Table 6.0 Utility Vaulting Features.

    1.2. **Installation:**

    1.2.1. **CenturyLink-Managed**

    1.2.1.1. CenturyLink provides CenturyLink-furnished hardware and software and a reasonable amount of supplemental labor assistance in connection with CenturyLink installation services in order to connect Customer hardware to the managed backup environment.

    1.2.2. **Self-Managed Only**

    1.2.2.1. Customer must provide their own device if aggregation switch is required.

    1.3. **Configuration: Configuration Documents:** Upon acceptance by Customer, CenturyLink documents the configuration details and conveys configuration and implementation details to Customer.

    1.4. **Administration:** CenturyLink Property: Any hardware and software provide by CenturyLink remains CenturyLink property at all times before, during and after the service period.

2. **Customer Responsibility**: The Service will not be subject to SLA Credits if Customer fails to provide any of the items in 2.1 and 2.2.

   2.1. Self-**Managed Only**

      2.1.1. **Hardware Purchase**: Customer is responsible for obtaining and deploying all required hardware, including Network Interface Card(s) (NIC), in which licensed software will be installed either through CenturyLink Managed Hosting Services or through self-implementation.

      2.1.2. **Dedicated Switch**: A compatible VLAN is required. Customer must provide a switch dedicated to the Service. CenturyLink provides configuration guidelines for the switch, and Customer is responsible for installation and ongoing management of the switch.

      2.1.3. **Operating Environment**: Customer is responsible for deploying and maintaining the Environment as described in Table 1.0 Supported Environment.

      2.1.4. **Port Planning Parameters**: Total monthly usage is primary factor used in determining Uplink Port type. Specifically, for Customers contracting for less than 3 TB per month, either a 10/100 copper- based port or Gigabit Ethernet (GigE) uplink is acceptable. If the Customer is contracting for 3 TB or more per month, a GigE uplink is required. Typically, one copper-based uplink or one GigE uplink dedicated to Utility Backup services is all that is necessary. CenturyLink reserves the right to require more ports, if necessary. See Table 2.0 Port Summary Table for details.

   2.2. Self-Managed and CenturyLink Managed

      2.2.1. **Provide Contact**: Designate and maintain a Customer Contact during the Service Term (including current contact information). Customer Contact‖ means a technical point of contact available 24x7 with sufficient knowledge, authority and access to address configuration issues, event notifications, system or infrastructure modifications and authentication of applicable CenturyLink systems.

      2.2.2. **Third Party Software**: Customer agrees to allow CenturyLink to install necessary software to enable backup operations, monitoring and reporting. If any third party software, including any corresponding documentation, is provided to Customer by CenturyLink in connection with the Service, Customer agrees to use such third party software strictly in accordance with all applicable licensing terms and conditions. CenturyLink makes no representations or warranties whatsoever with regard to such third party software.

      2.2.3. **Allows Access**: Customer agrees, as reasonably requested by CenturyLink, to provide access to Customer's premise and equipment and to otherwise cooperate with CenturyLink in performing the Service.

      2.2.4. **Notification of Changes**: Customer agrees to notify CenturyLink of any changes in the Customer hardware, including any system configuration changes or any hardware or software upgrades, which may affect the services provided. See Change Management in Definitions for additional information. Any Outages directly caused by Customer's failure to notify CenturyLink of changes will not be subject to SLA Service Credits.

      2.2.5. **Encryption Keys**: When either a Managed Hosting or Self-Managed Customer subscribes to Utility Backup Encryption service, the management and safeguarding of Encryption keys is the sole responsibility of the Customer. Please note that if the correct key is not provided, the data cannot be read or if the correct key is lost, then the data is lost.

      2.2.6. **Retention Policies:** Any retention period selected by Customer is a policy that Customer may assign to the particular information only and shall not be construed as a contractually binding retention period for CenturyLink. If the retention period selected by Customer extends beyond the Customer's Service Term or if Customer or CenturyLink terminate the Services prior to expiration of the Service Term, Customer acknowledges that CenturyLink has no further obligation to back up and store any Customer metrics or data after Agreement expiration or termination (notwithstanding any retention period selected by Customer) and CenturyLink will automatically delete all logs, including backups. Customer acknowledges and consents that it is solely Customer's responsibility to make copies of or obtain the logs and any other Customer data prior to expiration or termination of the Agreement.

2.2.7. **Termination**: Upon termination for any reason, Customer will have no further access to the Utility Backup Service and their data, including data with archive retention policies that extend beyond the termination date.

2.2.8. **Acknowledgements**: Customer acknowledges and agrees that:

2.2.8.1. All magnetic-based media used in connection with the Services are subject to malfunction or degradation that increases over time and CenturyLink has no responsibility whatsoever regarding any such media malfunctions and their potential impact on the Services.

2.2.8.2. The Service will backup and/or vault data in the form it is received from Customer and CenturyLink has no responsibility whatsoever regarding its accuracy or integrity.

1. **Additional Services**: At Customer's option and expense, and subject to prior CenturyLink approval due to the impending End of Life of the Service, Customer can choose to add the services listed below. The items can be added to the standard Service (described in Section 1.0) in a Service Order for an additional fee and additional terms and conditions may apply. Contact a sales representative for additional information.

3.1. **Additional Ports/VLANS**: Any Ports and VLANs in addition to those included in the standard CenturyLink design shall be subject to incremental charges as set forth in the relevant service order. Any Port or VLAN requested by Customer after the initial installation of the Service shall also be subject to additional, incremental charges.

3.2. **Dedicated Switch Installation**: CenturyLink can perform system integration and validation testing. Upon acceptance by the Customer, CenturyLink documents the configuration details and conveys configuration and implementation details to Customer.

3.3. **Database and Applications Backup:** CenturyLink Utility Backup and Utility Backup Encryption services are compatible with all applications and databases supported by Veritas. Please note that most Veritas software installations require Database Administration (DBA) or application engineering support. These services are provided either through the Customer's DBA or through CenturyLink DBA services, which are separate from Utility Backup services. CenturyLink backup services may provide canned scripts for hot backups, but the scripts MUST be customized for each Customer. DBA services are NOT included in backup service, but can be contracted separately. For all applications that are not supported by Veritas, the Utility Backup service requires an exported copy of the data. The standard service for hot backups is the same as outlined above: weekly Full Backups and daily Incremental Backups. All requirements for non-standard backup schedules must be approved through the CenturyLink Technical Assurance review for technical feasibility and proper service expectations. Data restores of agent-based backups (hot backups) is the responsibility of the DBA. CenturyLink backup service provides support for DBAs managing restores.

3.4. **Special Backups:** Month- or quarter-end backups to satisfy Customer-specific business needs, subject to the limitations of the data Retention that has been purchased. A purchase is not necessary for these service options as the additional GBs are captured in the monthly cumulative total. A call to the CenturyLink Service Center to request the backup will initiate the process.

3.5. **Copies of Data:** Additional copies of data for Customer Retention may be ordered. This service is not available for data backed up through Utility Backup NAS.

3.6. Additional labor time is available for additional activities that either fall outside the scope of the standard services and/or require additional hours of support beyond the standard offering. Additional labor time may be needed for activities such as archiving of special backups, off-site storage of special backup, instead of all monthly full backups, retention period set by Customer.

Tables and Appendices

Table 1.0 Port Summary Table

# GB per Month	Port/Uplink Type
Less than 3 TB	10/100 Copper
	GigE fiber
3 TB or more	GigE fiber

Table 2.0 Utility Backup Features

Feature
On demand backup of data, file retrieval and data restore services
Scheduled backups to minimize the impact to critical business activity
Customized backup scheduling of full and incremental backups, within the confines of the infrastructure capability
Client-based backups for single storage (SAN) LUNs up to 500 GBs
Connectivity via Ethernet or Fiber from the Customer's cage to the Managed Hosting area within the CenturyLink Data Center
PCI or S-BUS host interfaces are supported for UNIX or Windows servers
Weekly full and daily Incremental Backup of Customer's data
28-day data Retention – weekly full and daily Incremental Backups are maintained within the Utility Backup system for four weeks.
Restore Initiation within one (1) hour of the CenturyLink Service Center ticket creation. Please see Utility Backup Vaulting SLA for additional information.
5 hours of labor per month for requests, changes and restores
Reporting: View daily backup reports Download information to create custom reports Monitor the status of backup jobs Up-to-date on the status of any open trouble tickets

Table 3.0 Utility Backup Encryption Features

Features
Includes all features listed in Table 2.0 Utility Backup Features
Encryption services activated on a server requires that all data must be encrypted on that server. This service cannot encrypt select data on the server
Encryption is supported at the client level. All data is encrypted. File level encryption is not available. File metadata is not encrypted. Examples of file metadata are filenames, last modified date and permissions/ACLs
Utilizes 128-bit Encryption
Uses AES, US federal standard, symmetric block cipher
Encryption keys can be managed to a single client level. Data can only be restored to client with Encryption key

Table 4.0 Utility Backup NAS Features

Features
Point-In-Time Backup with integrated snapshot. The native NDMP agent on the NAS device creates a snapshot at the start of the backup
Backups originate from the NAS platform not from the customer server, eliminating the need for the following: Backup agent on customer server and port requirements

Table 5.0 Available Backup Options

Backup Option	Backup and Retention policies
Weekly	option includes weekly Full Backups
	daily incremental
	28-day data Retention
	Backups are maintained within the Utility Backup system for four weeks
Monthly	option provides one Full Backup per month
	Incremental Backups on days when Full Backup is not taken.
	90-day data Retention

Backup Option	Backup and Retention policies
	Backups are maintained within the Utility Backup system for three months
	This option is applicable for circumstances in which the customer has a large quantity of static data with a small daily change rate and is aware of the potential for long recovery times due to the large number of restores necessary to restore data.

Table 6.0 Utility Vaulting Features

Features
Full Backups only are vaulted (taken offsite)
Standard backup schedule is weekly full and daily incremental
All data in the Full Backup is taken offsite (not just specific files or servers)
All data is retained for the same period of time
Regularly scheduled rotation of backup tapes to off-site location
Cataloging and indexing of backup data to provide accurate data retrieval
Customized off-site Retention schedules
Off-site data retrieval for restore requests is initiated within one hour of ticket creation with the CenturyLink Service Center
Restore Initiation within one (1) hour upon receiving the data from the off-site location, unless acclimatization is required

Appendix A: Pricing

Utility Backup, Utility Backup Encryption and Utility Backup NAS Pricing

- Pricing and reporting is based on decimal GB calculations (1 TB = 1000 GB)
- Pricing is based on the cumulative monthly GBs transferred from server to media (backup function)
- Customer estimates total GB transferred for backup during the month and chooses the best volume tier. Customer is billed based on volume tier chosen per data center.
- Backup Clients are associated to one Utility Backup service package with a unique AIP number. Variable or overage rates are applied when the cumulative monthly transferred GBs amongst all these backup clients is great than the selected volume tier for this unique AIP.
- Standard volume tiers begin at 50 GB and are available in the following predefined increments:

Data Volume	Increment Sizes
Up to 1TB	50 GB increments
1 TB to 10 TB	500 GB increments from 1 TB to 10 TB
10 TB and up	5 TB increments
	Creation of custom volume tier for 10 TB or larger

Utility Vaulting Pricing

Pricing is based on the frequency of off-siting, length of Retention and amount of data. Backup Clients are associated to one Utility Backup service package with a unique AIP number. Variable or overage rates are applied when the cumulative monthly transferred GBs amongst all these backup clients is great than the selected volume tier for this unique AIP. Each unique combination of vaulting –‖frequency‖ and –‖retention‖ requires a unique AIP. Backup GBs transferred with different values of —frequency‖ and —retention‖ cannot share the same AIP.

Pricing Example

Customer chooses 250 GB Utility Backup or Utility Backup Encryption volume tier at $X MRC. In March, Customer actually backs up 307 GB. A variable rate fee is applied at $Y/GB for the overage ($Y/GB x 57 GB). Overage amount = $Z Variable Utility Backup charge for March.

Similarly, for Utility Vaulting, whatever the overage is for the Utility Backup volume tier $A, the Customer will be charged a variable rate fee for their associated Vaulting service, $C. As stated above, in March a total 307 GB are backed up. The variable rate fee of $B/GB associated with the specific Vaulting service is applied ($B/GB x 57 GB). Overage amount = $C Variable Utility Vaulting charge for March, in addition to the Customer's Utility Vaulting committed rate of $A.

Total March Invoice = $X + $Z + $A + $C.

Appendix B: Exceptions

The following table summarizes the standard policy for handling common exceptions and events for Utility Backup, Utility Backup Encryption and Utility Vaulting.

Exception/Event	CenturyLink Policy
File open / not backed up	No action
	File is picked up on the next scheduled backup. Files that are never closed are never backed up without the purchase of additional services.
Backup client not accessible	Notify Customer
	Backup automatically picks up with next day's schedule; except that if a Full Backup is missed, the next day a Full Backup is completed subject to Customer limitations.

Exception/Event	CenturyLink Policy
Tape or drive failure	Restart Job.
	CenturyLink reallocates a different drive and restarts the job unless previous restrictions are defined by the Customer for Backup Client.
Unable to restore data	Attempt Alternate Restore, Contact Customer
	CenturyLink attempts to restore the file from a different/previous backup job. The Customer is notified of the failure and verifies which alternate file should be used, if any. Notice is provided within the restore Initiation window defined for the particular file. Note: Customers approve backup policies and Retention periods.
Encryption Key is not available	If the correct key is lost, the associated data is irrecoverable by any means.
	CenturyLink maintains no emergency procedures for recovering any data under such circumstances.

The following table summarizes the standard policy for handling common exceptions and events for Utility Backup NAS,

Exception/Event	CenturyLink Policy
Backup during maintenance	Backup may be suspended during periods in which maintenance is occurring.
	Backups will be resumed after completion of maintenance by CenturyLink without customer action.
Restore during active backup window	Customer will be given the choice of terminating active backups to facilitate restore.
	CenturyLink will resume backup service at completion of restore.
Insufficient space during backup	Because NDMP backups require working space to facilitate snapshots, the customer must maintain sufficient free space on their volume to cache file system changes that occur during backup.
Backup stream too large	There may be size limitations of individual backup streams that will require backup of a volume's sub directories in multiple backup jobs rather than one large backup stream. Backup streams must be less than 1 TB with the current backup software version.
Tape or drive failure	Restart Job.
	CenturyLink restarts the job after repair of drive, or reallocation to a different drive.
Unable to restore data	Attempt Alternate Restore, Contact Customer.

Exception/Event	CenturyLink Policy
	CenturyLink attempts to restore the file from a different/previous backup job. The Customer is notified of the failure and verifies which alternate file should be used, if any. Notice is provided within the restore Initiation window defined for the particular file. Note: Customers approve backup policies and Retention periods.

Appendix C: Utility Backup and Vaulting Care Services

Service Description

CenturyLink provides Backup Care services on Customer-owned equipment that includes tape backup and restore on demand on Customer-owned high-capacity and high-availability tape libraries. Utility Vaulting includes rotation and media management to off-site secure data archiving facility. CenturyLink provides continuous 24 hours per day, 7 days per week monitoring and management of the backup architecture and equipment. CenturyLink controls each specific interface and configuration to deliver troubleshooting, maintenance and escalation coverage on a real-time basis.

Installation

If additional servers are required, CenturyLink provides guidance for software installation followed by configuration, backup scheduling and configuration, and testing. CenturyLink can either install Customer-owned tape backup software or provide and install the tape backup software (all software provided remains CenturyLink property at all times before, during and after service period) necessary to connect Customer hardware. CenturyLink performs system integration and validation testing to ensure proper functionality. Upon acceptance by the Customer, CenturyLink documents the configuration details and conveys configuration and implementation details to Customer.

Backup Care

All of the following are included in Backup Care,

- On demand backup of data to tape, file retrieval, and data restore services.
- Scheduled backups avoiding impact to critical business activity.
- Connectivity via Ethernet or Fibre.
- PCI or S-BUS host interfaces are supported for UNIX or Windows servers
- Customized backup scheduling of full and incremental backups, within the confines of the infrastructure capability.
- Customized in library retention within confines of the infrastructure capacity.
- Restore commencement within one (1) hour of the Response Center ticket creation. Please see Response Center Ticket Creation in the Customer Guide for details.
- 15 hours of labor per month for requests, changes and restores. Additional labor is available (see Options above).
- Event notification to keep Customers informed of backup status.
- Customer support available 24 hours a day, 7 days a week.

Utility Vaulting

All of the following are included in the Utility Vaulting service,

- Regularly scheduled rotation of backup tapes to off-site location.
- Cataloging and indexing of backup tapes ensuring accurate tape retrieval.
- Customized off-site retention schedules.
- Cataloging, indexing, media management and warehousing to accommodate long-term off-site storage.
- Off-site tape retrieval for restore requests initiated immediately following creation of ticket by the Response Center.
- Restore commencement within one (1) hour upon receiving the media from the off-site location, unless acclimatization is required.

Customer Requirements

- Customer is responsible for obtaining and deploying all Customer hardware in which licensed software is installed either through CenturyLink managed hosting services or through self-implementation.
- Customer provides all hardware necessary to support the Backup Care service as stated in this CenturyLink Service Guide, including the master server, tape libraries, switches, NICs, etc. Before implementation, the hardware provided by the Customer is to be reviewed by CenturyLink to ensure Backup Care service can be delivered per the terms of this CenturyLink Service Guide.
- Customer is responsible for covering the maintenance costs of all hardware implemented for the service. If hardware is not maintained per the manufacturer's requirements, this CenturyLink Service Guide will not apply.
- Customer is responsible for providing all media required for Backup Care services, including tapes, labels, cleaning cartridges, etc.
- Customer agrees to allow CenturyLink to install necessary software to enable backup operations, monitoring and reporting.
- Customer agrees, as reasonably requested by CenturyLink, to provide CenturyLink with access to Customer's premises and equipment and to otherwise cooperate with CenturyLink in performing the services.
- Customer agrees to notify CenturyLink of any changes in the Customer hardware, including any system configuration changes or any hardware or software upgrades, which may affect the services provided hereunder. Please see —Change Managementll for details.
- Ensure that Customer has the proper operating environments as listed above.
- If Customer owns Veritas client software, Customer must purchase annual maintenance contract from Veritas.

Additional Backup Care & Utility Vaulting Options

- On-Demand retrieval of off-site media for restoration of data
- Additional labor time is available for additional activities that either fall outside the scope of the standard services and/or require additional hours of support beyond the standard offering. Additional labor time may be needed for activities such as:
  - o Month- or quarter-end backups to satisfy Customer-specific business needs.
  - o Copies of tapes for Customer retention for an additional level of availability and reliability.

Service Specific Exceptions

The following table summarizes the standard policy for handling common exceptions and events for Backup Care and Utility Vaulting,

Exception/Event	CenturyLink Policy
File Open/Not backed up	*No action.*
	File is picked up on the next scheduled backup. Files which are never closed are never backed up without the purchase of additional services.
Backup Client not accessible	*Notify Customer.*
	Backup automatically picks up with next day's schedule; except that if a Full Backup is missed, the next day a Full Backup is completed subject to Customer limitations.
Tape or drive failure	*Restart Job.*
	CenturyLink reallocates a different drive and restarts the job unless previous restrictions are defined for that Backup Client Server by the Customer.
Unable to restore from tape	*Attempt Alternate Restore, Contact Customer.*
	CenturyLink attempts to restore the file from a different/previous backup job. The Customer is notified of the failure and verifies which alternate file should be used, if any. Notice is provided within the restore initiation window defined for the particular file.
	Note: Customers approve backup policies and retention periods.

Databases and Applications

Backup Care service is compatible with all applications and databases supported by Veritas. Please note some Veritas software installations may require additional consulting services. For all applications that are not supported by Veritas, the Backup Care service requires an exported copy of the data. Hot backup for applications are evaluated on a case-by-case basis.

Security

CenturyLink employs a comprehensive security program that provides physical, logical, and network security measures. Only CenturyLink employees and vaulting vendors are allowed to physically handle tapes.

Definitions

Advanced Encryption Standards (AES): The Advanced Encryption Standard (AES) is a specification for the encryption of electronic data established by the U.S. National Institute of Standards and Technology (NIST) in 2001.

CenturyLink Portal: The interface that ties together centralized systems that CenturyLink uses to provide services to Customers. Included in CenturyLink Portal are systems for order processing, provisioning, procurement, management and monitoring, change management, billing, Customer support/ticketing and reporting.

CenturyLink Service Center: The primary organization for resolving infrastructure issues that is staffed 24/7/365 to respond in a timely manner to incidents and requests pertaining to Customer IT infrastructure.

Change Management: The Customer is provided at least seventy-two (72) hours prior written notice of any changes made by CenturyLink that affect the Services, other than regularly scheduled maintenance outages. However, if a shorter notification period is required, due to an urgent or emergency situation, changes can be made without the agreement of the Customer, as deemed necessary on a case-by-case basis. CenturyLink strives to minimize outages that may be caused by a change. In the event that an outage is required, CenturyLink will use reasonable efforts to minimize the impact of the change and schedule the outage based upon the Customer's and CenturyLink' requirements. If an outage is required, such outage will be considered a scheduled outage. CenturyLink will use reasonable efforts to minimize the impact of the change on the affected service. CenturyLink reserves the right, however, to proceed with any change if CenturyLink determines that the change is necessary. CenturyLink will take reasonable steps to minimize any harm to the Customer's specific environment as a result of such change. Customer is required to provide at least seventy-two (72) hours prior notification to CenturyLink Service Center of any changes to its configuration that interface with the Services. On a fee-for-service basis, CenturyLink can provide a representative at the CenturyLink POD to address any connectivity issues that arise during the Customer's configuration changes.

Data Center: means the facility in which the systems are located.

Full Backup: Complete save of Customer chosen data files on a given Backup Client, not including operating system software.

Incremental Backup: Backup to tape of all data files that have changed since the last backup (Full Backup or Incremental Backup).

LUNS: A logical unit number (LUN) is a number used for identifying a logical unit relating to computer storage. A logical unit is a device addressed by protocols and related to fiber channel, small computer system interface (SCSI), Internet SCSI (iSCSI) and other comparable interfaces. LUNs are essential for managing the block storage arrays of a storage area network (SAN). A typical LUN is used with any component supporting read/write processes. LUNs are commonly used for logical discs produced on a SAN.

Maintenance Windows: A period of time designated in advance by CenturyLink, during which preventive maintenance that could cause disruption of service may be performed. Current Scheduled Maintenance windows are:

- Americas: Monday through Thursday 10:00AM-4:00PM local time at the data center providing backup service
- EMEA: Monday through Thursday 10:00AM to 4:00PM local time
- APAC: Monday through Thursday 10:00AM to 4:00PM local time
- Japan: Monday through Thursday 10:00AM to 4:00PM local time

Network Attached Storage (NAS): is file-level computer data storage connected to a computer network providing data access to a heterogeneous group of clients. NAS not only operates as a file server, but also is specialized for this task either by its hardware, software, or configuration of those elements.

Network Data Management Protocol (NDMP): An open protocol used to control data backup and recovery communications between primary and secondary storage in a heterogeneous network environment.

Network File System (NFS): A file sharing protocol used natively by the UNIX and Linux operating systems to share files over a TCP/IP network.

Peripheral Component Interconnect (PCI): A PCI slot is used to add extension cards to a machine.