

CenturyLink Technology Solutions Service Guide

Web Application Software 1.0

Microsoft Internet Information Services (IIS)

This Service Guide (“SG”) sets forth a description of the Web Application Software 1.0: Managed Microsoft Internet Information Services (IIS) Service (“Service”) offered by CenturyLink, including technical details and additional requirements or terms. This SG is subject to and incorporated into the Agreement and Hosting 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.

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Service Description

1. **Standard Service Description:** Web Application Software 1.0: Microsoft Internet Information Services (the “Service” or “MS-IIS”) is a Managed Hosting service that consists of the software components, licensing, installation, configuration, administration, monitoring, maintenance and support as described in Section 1.0. The Service Level Agreement (SLA) associated with this Service Guide is the “Managed Hosting Services SLA.”
 - 1.1. **Software Components:** CenturyLink supports the supported versions and Microsoft IIS services listed below. Customer selects the version and services at the time of purchase.
 - 1.1.1. **Supported Versions:**
 - 1.1.1.1. Microsoft Internet Information Services 6.0
 - 1.1.1.2. Microsoft Internet Information Services 7.0
 - 1.1.1.3. Microsoft Internet Information Services 7.5
 - 1.1.1.4. Microsoft Internet Information Services 8.0
 - 1.1.1.5. Microsoft Internet Information Services 8.5
 - 1.1.2. **Supported Services:**
 - 1.1.2.1. ASP.Net: 1.1, 2.0, 3.0, 3.5, 4.0, 4.5
 - 1.1.2.2. File Transfer: IIS FTP Services
 - 1.1.2.3. Message Processing: IIS SMTP Services
 - 1.1.2.4. Web Publishing: IIS WWW Service
 - 1.2. **Licensing:** Licensing is included in the CenturyLink provided Operating System under the Microsoft Service Provider Use Rights and License Agreement. All users of the Service are subject to the terms and conditions of the referenced license agreements.
 - 1.3. **Installation:** CenturyLink will provide installation tasks marked with an “X” in the CenturyLink column in Table 1.0 Roles and Responsibilities for the following Supported Operating Systems and Hosting Platforms. Customer selects the Operating System and platform at the time of purchase.
 - 1.3.1. **Supported Operating Systems:**
 - 1.3.1.1. Microsoft Windows Server 2003 R2
 - 1.3.1.2. Microsoft Windows Server 2008
 - 1.3.1.3. Microsoft Windows Server 2008 R2
 - 1.3.1.4. Microsoft Windows Server 2012
 - 1.3.1.5. Microsoft Windows Server 2012 R2
 - 1.3.2. **Supported Hosting Platforms:**
 - 1.3.2.1. CenturyLink Cloud
 - 1.3.2.2. CenturyLink Dedicated Cloud
 - 1.3.2.3. Intelligent Hosting
 - 1.4. **Configuration:** CenturyLink will provide configuration tasks marked with an “X” in the CenturyLink column in Table 1.0 Roles and Responsibilities.
 - 1.5. **Administration:** CenturyLink will provide administration tasks marked with an “X” in the CenturyLink column in Table 1.0 Roles and Responsibilities.
 - 1.5.1. **Security:** CenturyLink utilizes CIS Level 1 security benchmarks and NIST for additional security standards when deploying Managed Microsoft IIS.
 - 1.5.2. **Access:** Customers are given administrative full control to Managed Microsoft IIS. Any outages directly caused by Customer are not subject to SLA credits.

- 1.6. Monitoring:** CenturyLink will provide monitoring tasks marked with an “X” in the CenturyLink column in Table 1.0 Roles and Responsibilities.
 - 1.6.1. Production Environment Notification:** CenturyLink will retain primary notification and resolution responsibilities for all automated environment alerts in the production environment. The production environment is subject to SLA credits.
 - 1.6.2. Non-Production Environment Notification:** A Customer technical contact will be engaged to perform primary resolution of incidents associated with a non-production level environment. The non-production environment is not subject to SLA credits
 - 1.6.3. Monitored Values:** The tables listed below describe the values monitored for the Service
 - 1.6.3.1. Microsoft IIS WWW Service, Monitor Type/Frequency - Table 2.0
 - 1.6.3.2. Microsoft IIS FTP Service, Monitor Type/Frequency - Table 3.0
 - 1.6.3.3. Microsoft IIS SMTP Service, Monitor Type/Frequency - Table 4.0
- 1.7. Maintenance and Support:** CenturyLink will provide maintenance and support tasks marked with an “X” in the CenturyLink column in Table 1.0 Roles and Responsibilities
 - 1.7.1. Patch Releases:** CenturyLink compiles, certifies, approves and delivers Apache Httpd Software patch branch versions for installation in a Customer environment. Customer must approve the installation by contacting CenturyLink support. Any outages directly caused by Customer’s failure to accept the implementation of a patch will not be subject to SLA credits.
 - 1.7.2. Change Management:** All changes to the CenturyLink managed applications; systems, network and facilities are subject to CenturyLink’s change management process. This process is intended to confirm that work is reviewed for completeness (risk assessment, completed test procedure, metrics for measuring progress, back out procedure, etc.) and accuracy prior to scheduling and implementation.
 - 1.7.3. Maintenance Windows:** All times listed under Schedule Maintenance Windows are local times and subject to change. CenturyLink will use commercially reasonable efforts to perform routine maintenance only during the Saturday or Sunday defined maintenance windows. See Definitions for additional information.
 - 1.7.4. Support:** Support for the Service is provided through the project manager during installation, content migration and Customer validation. At the point of go-live the Service is passed from project management to CenturyLink Service Center for full 24x7 monitoring and management. The point of go-live is when Customer notifies CenturyLink project manager that the environment is ready to go-live.
- 2. Customer Responsibilities:** Customer is responsible for all tasks with an “X” in the Customer column in Table 3.0 Roles and Responsibilities. Customer acknowledges and agrees that its failure to perform its obligations set forth in Table 1.0 may result in CenturyLink’s inability to perform the Services and CenturyLink shall not be liable for any failure to perform in the event of Customer failure.
 - 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.
- 3. Additional Services:** At Customer’s option and expense, Customer can choose to have CenturyLink complete one or more of the tasks in Table 1.0 with an “X” in the Customer column and/or items listed below. The tasks can be added to the standard Service (described in Section 1.0) for an additional fee described in a separate Statement of Work (“SOW”) and/or Service Order. Contact a sales representative for additional information.
 - 3.1. Minor Releases:** Minor Releases (see Definitions) require a new installation of the software binaries, which is not included in this Service. CenturyLink recommends that Customer purchase a new managed server (via a Service Order) and migrate data (defined in a SOW) as a best practice.

- 3.2. Major Releases:** Major Releases (see Definitions) require a new installation of the software binaries, which is not included in this Service. CenturyLink recommends that Customer purchase a new managed server (via a Service Order) and migrate data (defined in a SOW) as a best practice.
- 2.1 SSL Certificates:** SSL Certificates are small data files that digitally bind a cryptographic key to an organization's details. When installed on a web server, it allows secure connections from a web server to a browser.

Tables and Appendices

Table 1.0 Roles and Responsibilities

Activity	Task	CenturyLink	Customer
License	Procure SSL Certificate (if purchased)	X	
	Maintain Licensing and Support with Microsoft	X	
Installation	Prepare Server for Application Service (OS Specific Parameters)	X	
	Provide detailed requirements prior to physical build work		X
	Install ASP.Net versions (not native to OS)	X	
	Install Microsoft IIS (including available sub components)	X	
	Harden Microsoft IIS to CIS Level 1 and CenturyLink Standards	X	
	Install SSL Certificates	X	
	Install CenturyLink Monitoring	X	
	Perform Quality Assurance against Microsoft IIS Installation/Hardening	X	
	Provide sign off that environment is ready to go-live		X
	Configuration	Create/Configure Application Pools	
Create/Configure Sites			X
Configure Site Connectivity (Host Headers, TCP Port, IP Address and SSL Certificate allocation)		X	
Deploy Customer Code and Content			X
Create/Configure ODBC resources			X
Configure CenturyLink Monitoring		X	
Install and configure CenturyLink Disk/Tape Backups (if purchased)		X	
Data validation, User Acceptance Testing (UAT), Site Acceptance Testing (SAT)			X
Monitoring	Application Log Monitoring	X	
Administration	Maintain Customer Code and Content		X
	Customer Code and Content Packaging		X
	Recycle Application Pool('s)	X	
	Restart/Stop/Start Services	X	
	Update managed servers with all recommended patches, upon customer request	X	
	Request/Initiate DNS Zone changes when using CenturyLink managed DNS Services		X
Maintenance and Support	Coordinate patching with Customer during maintenance hours	X	
	Customer initiated Redundancy & High Availability Test/Audit (Excludes Disaster Recovery testing)	X	

Table 2.0 Monitors for Microsoft IIS WWW Service

Following are the monitors that are included with this Service and the data collection frequency.

Monitor	Description of Alarm Triggers	Frequency
IIS CPU Usage	The IIS inetInfo process is over 90%	5 Min
IIS Memory Usage	The IIS inetInfo process memory usage is greater than 90% of the total server memory	5 Min
IIS ASP State Service	The IIS ASP.net State service is not running	1 Min
IIS Admin Service	The IIS Admin (inetInfo) service is not running	1 Min
IIS WWW Service	The IIS W3SVC service is not running	1 Min
IIS Application Host Helper Service	The IIS Application Host Helper service is not running	1 Min
IIS WAS Service	The IIS WAS service is not running	1 Min
Windows Event Log	The Event log is polled for IIS Errors related to the web server components of IIS	Instant
IIS WWW Port Check	Alarms if TCP Port 80 is not listening	5 Min
IIS Blocked Requests	Alarms when a request was denied because a user defined bandwidth threshold was exceeded	5 Min
IIS Not Found Errors	Alarms when a 404 error is generated	5 Min

Table 3.0 Monitors for Microsoft IIS FTP Service:

Following are the monitors that are included with this Service and the data collection frequency.

Monitor	Description	Frequency
FTP Service	The IIS FTP service is not running	1 Min
Windows Event Log	The Event log is polled for IIS Errors related to the FTP server components of IIS	Instant
FTP Port Check	Alarms if TCP port 21 is not listening	5 Min
FTP Bytes Sent	Alarms if the FTP Service is sending more than x MB	15 Min
FTP Bytes Received	Alarms if the FTP Service is receiving more than x MB	15 Min

Table 4.0 Monitors for Microsoft IIS SMTP Service:

Following are the monitors that are included with this Service and the data collection frequency.

Monitor	Description of Alarm Triggers	Frequency
SMTP Service	The IIS SMTP service is not running	1 Min
Windows Event Log	The Event log is polled for IIS Errors related to the FTP server components of IIS	Instant
SMTP Port Check	Alarms if TCP port 25 is not listening	5 Min
SMTP Connection Refused	Alarms when the server cannot create an outbound connection	5 Min

Definitions

ASP.Net: ASP.NET application services are built-in Web services that provide access to features such as forms authentication, roles, and profile properties. These services are part of a service-oriented architecture (SOA), in which an application consists of one or more services provided on the server, and one or more clients.

CenturyLink Service Center: The location where CenturyLink staff administers, supervises, monitors and maintains the CenturyLink services

CIS: (Center for Internet Security) CIS develops and distributes consensus-based and internationally recognized solutions that help organizations improve their cyber security and compliance posture. The CIS Security Benchmarks Division develops and distributes Security Configuration Benchmarks, Security Metrics, and The Benchmark Assessment Tool.

CIS Level I Benchmarks define minimum standards for securing various operating systems including Windows, and variations of Unix. These standards should be used to improve the “out of the box” security of common operating system software to a prudent “due care” minimum level. By definition, the security actions included in CIS Level I Benchmarks satisfy three conditions: (1) they can be safely implemented by a system administrator of any level of technical security skill, (2) they will generally “do no harm” to functionality commonly required by everyday users, and (3) they can be scored by an associated software tool. This document is an example of a Level I Benchmark.

Compiled: The compilation function turns source files into directly executable or intermediate objects. Not every project will require this function. While for simple programs the process consists of a single file being compiled, for complex software the source code may consist of many files and may be combined in different ways to produce many different versions.

Environment: The setting where software and other products are placed into operation for their intended uses by end users.

Hotfix: A hotfix or quick fix engineering update is a single cumulative package that includes information that is used to address a problem in a software product.

IIS FTP Service: IIS provides an FTP service, which you can use to allow users on remote computer systems to copy files to and from your server on a network that uses TCP/IP. The IIS FTP service is an implementation of the RFC 959 File Transfer Protocol (FTP), and several extensions. The FTP protocol is implemented on top of TCP, which ensures that file transfers are complete and that data transfer is accurate.

IIS SMTP Service: The SMTP service in IIS processes messages by using the Simple Mail Transfer Protocol (SMTP), which is a TCP/IP protocol that is used to send and receive messages from one computer to another on a network. This protocol is used in intranets and on the Internet to route e-mail.

IISW3SVC: Internet Information Services (IIS) ISAPI (Internet Server Application Programming Interface) extensions and filters can extend and modify the request-processing capabilities of IIS

IIS WWW Service: The World Wide Web Publishing Service (WWW service) provides Web publishing for IIS, connecting client HTTP requests to Web sites running on an IIS-based Web server. The WWW service manages and configures the IIS core components that process HTTP requests. These core components include the HTTP protocol stack (HTTP.sys) and the worker processes.

Inetinfo: Inetinfo or the IIS Admin Service Helper, is a part of Microsoft Internet Information Services (IIS) that is used for debugging purposes.

II WAS: Windows Process Activation Service (WAS) manages application pool configuration and the creation and lifetime of worker processes for HTTP and other protocols.

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: Saturday 00:00AM to 5:00AM; Sunday 00:00AM to 5:00AM
- EMEA: Saturday 02:00AM to 6:00AM
- APAC (Except Japan): Saturday 21:00 (GMT) AM to Sunday 01(GMT)
- Japan: Sunday 04:00 (JST) to 8:00 (JST)

Major Release: Major Releases (X.y.z) are vehicles for delivering major and minor feature development and enhancements to existing features. They incorporate all applicable error corrections made in prior Major Releases, Minor Releases, and Patch Releases. Software Provider typically has one Major Release per year.

Minor Release: Minor Releases (x.Y.z) are vehicles for delivering minor feature developments, enhancements to existing features, and defect corrections. They incorporate all applicable error corrections made in prior Minor Releases, and Patch Releases.

NIS (Network Information Service) The Network Information Service, or NIS (originally called Yellow Pages or YP) is a client-server directory service protocol for distributing system configuration data such as user and host names between computers on a computer network.

Non-Production Environment: A product is still being used theoretically. Users, typically engineers, look for bugs or design flaws.

Operating System: An operating system (OS) is software that manages computer hardware resources and provides common services for computer programs. The operating system is an essential component of the system software in a computer system. Application programs usually require an operating system to function.

Packaging: is the process of creating a meta-program that in turn automatically installs software across multiple computers. The meta-program typically includes a set of default properties for the applications it installs

Patch Release: Patch Releases (x.y.Z) are vehicles for delivering security fixes, feature developments, enhancements to existing features, and defect corrections. They incorporate all applicable error corrections made in prior Patch Releases.

Production Environment: A production environment can be thought of as a real-time setting where programs are run and hardware setups are installed and relied on for organization or commercial daily operations.

Service Level Agreement: A service-level agreement (SLA) is a document describing the level of service expected by a customer from CenturyLink, laying out the metrics by which that service is measured, and the remedies or penalties, if any, should the agreed-upon levels not be achieved

SLA Credit: SLA Credit: Service Level Agreement Credits are refunds given by CenturyLink to a Customer if the service falls below a contractually agreed service levels. See Section 1.0 for the SLA agreement associated with this service

SMTP Port Check: The Simple Mail Transfer Protocol (SMTP) port check is configured to ensure that the service is running.

SMTP Service: The Simple Mail Transfer Protocol (SMTP) service provided by IIS is a simple component for delivering outgoing e-mail messages.

Software Binaries: A binary file is a file whose content must be interpreted by a program or a hardware processor that understands in advance exactly how it is formatted.

Software Provider: The third party that makes and sells software products described in section 1.0.

Statement of Work: A statement of work (SOW) is a formal document that captures and defines the work activities, deliverables, and timeline a vendor must execute in performance of specified work for a client. The SOW usually includes detailed requirements and pricing, with standard regulatory and governance terms and conditions.

Upgrades: Upgrades mean a Major Release or Minor Release of the software.