



3-6-2009 Draft

DDR2201 Series Residential Gateway Installation and Operation Guide

Please Read

Important

Please read this entire guide. If this guide provides installation or operation instructions, give particular attention to all safety statements included in this guide.

Notices

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IMPORTANT SAFETY INSTRUCTIONS

The servicing instructions in this notice are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions, unless you are qualified to do so.

<p>Note to System Installer</p> <p>For this apparatus, the cable shield/screen shall be grounded as close as practical to the point of entry of the cable into the building. For products sold in the US and Canada, this reminder is provided to call the system installer's attention to Article 800-93 and Article 800-100 of the NEC (or Canadian Electrical Code Part 1), which provides guidelines for proper grounding of the cable shield.</p> <div style="text-align: center;">  </div> <p>This symbol is intended to alert you that uninsulated voltage within this product may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any inside part of this product.</p> <p>Ce symbole a pour but d'alerter toute personne qu'un contact avec une pièce interne de ce produit, sous tension et non isolée, pourrait être suffisant pour provoquer un choc électrique. Il est donc dangereux d'être en contact avec toute pièce interne de ce produit.</p>	<div style="text-align: center;">  </div> <p>CAUTION: To reduce the risk of electric shock, do not remove cover (or back). No user-serviceable parts inside. Refer servicing to qualified service personnel.</p> <p>WARNING TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.</p> <div style="text-align: center;">  </div> <p>This symbol is intended to alert you of the presence of important operating and maintenance (servicing) instructions in the literature accompanying this product.</p> <p>Ce symbole a pour but de vous avertir qu'une documentation importante sur le fonctionnement et l'entretien accompagne ce produit.</p>
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Notice à l'attention des installateurs de réseaux câblés

Les instructions relatives aux interventions d'entretien, fournies dans la présente notice, s'adressent exclusivement au personnel technique qualifié. Pour réduire les risques de chocs électriques, n'effectuer aucune intervention autre que celles décrites dans le mode d'emploi et les instructions relatives au fonctionnement, à moins que vous ne soyez qualifié pour ce faire.

<p>Remarque à l'attention de l'installateur du système</p> <p>Avec cet appareil, le blindage/écran du câble doit être mis à la terre aussi près que possible du point d'entrée du câble dans le bâtiment. En ce qui concerne les produits vendus aux États-Unis et au Canada, ce rappel est fourni pour attirer l'attention de l'installateur sur les articles 800-93 et 800-100 du Code national de l'électricité (ou Code de l'électricité canadien, Partie 1) qui fournissent des lignes directrices concernant la mise à la terre correcte du blindage (écran) du câble.</p> <div style="text-align: center;">  </div> <p>Ce symbole a pour but de vous prévenir que des tensions électriques non isolées existent à l'intérieur de ce produit, pouvant être d'une intensité suffisante pour causer des chocs électriques. Il est donc dangereux d'établir un contact quelconque avec l'une des pièces comprises à l'intérieur de ce produit.</p>	<div style="text-align: center;">  </div> <p>ATTENTION: Pour réduire les risques de chocs électriques, ne pas enlever le couvercle (ou le panneau arrière). Ne contient aucune pièce réparable par l'utilisateur. Confier les interventions aux techniciens d'entretien qualifiés.</p> <p>AVERTISSEMENT POUR ÉVITER LES INCENDIES OU LES CHOC ÉLECTRIQUES, NE PAS EXPOSER L'APPAREIL À LA PLUIE OU À L'HUMIDITÉ.</p> <div style="text-align: center;">  </div> <p>Ce symbole a pour but de vous prévenir de la présence d'instructions importantes relatives au fonctionnement ou à l'entretien (et aux réparations) dans la documentation accompagnant ce produit.</p>
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IMPORTANT SAFETY INSTRUCTIONS

Mitteilung für CATV-Techniker

Die in dieser Mitteilung aufgeführten Wartungsanweisungen sind ausschließlich für qualifiziertes Fachpersonal bestimmt. Um die Gefahr eines elektrischen Schlags zu reduzieren, sollten Sie keine Wartungsarbeiten durchführen, die nicht ausdrücklich in der Bedienungsanleitung aufgeführt sind, außer Sie sind zur Durchführung solcher Arbeiten qualifiziert.

<p>Mitteilung an den Systemtechniker</p> <p>Für dieses Gerät muss der Kabelschutz/Schirm so nahe wie möglich am Eintrittspunkt des Kabels in das Gebäude geerdet werden. Dieser Erinnerungshinweis liegt den in den USA oder Kanada verkauften Produkten bei. Er soll den Systemtechniker auf Paragraph 800-93 und Paragraph 800-100 der US-Elektrovorschrift NEC (oder der kanadischen Elektrovorschrift Canadian Electrical Code Teil 1) aufmerksam machen, in denen die Richtlinien für die ordnungsgemäße Erdung des Kabelschirms festgehalten sind.</p>	
 <p>Dieses Symbol weist den Benutzer auf das Vorhandensein von nicht isolierten gefährlichen Spannungen im Gerät hin, die Stromschläge verursachen können. Ein Kontakt mit den internen Teilen dieses Produktes ist mit Gefahren verbunden.</p>	<p>ACHTUNG: Zur Vermeidung eines Stromschlags darf die Abdeckung (bzw. die Geräterückwand) nicht entfernt werden. Das Gerät enthält keine vom Benutzer wartbaren Teile. Wartungsarbeiten dürfen nur von qualifiziertem Fachpersonal durchgeführt werden.</p> <p>WARNUNG DAS GERÄT NICHT REGEN ODER FEUCHTIGKEIT AUSSETZEN, UM STROMSCHLAG ODER DURCH EINEN KURZSCHLUSS VERURSACHTEN BRAND ZU VERMEIDEN.</p>  <p>Dieses Symbol weist den Benutzer darauf hin, dass die mit diesem Produkt gelieferte Dokumentation wichtige Betriebs- und Wartungsanweisungen für das Gerät enthält.</p>

Aviso a los instaladores de sistemas CATV

Las instrucciones de reparación contenidas en el presente aviso son para uso exclusivo por parte de personal de mantenimiento cualificado. Con el fin de reducir el riesgo de descarga eléctrica, no realice ninguna otra operación de reparación distinta a las contenidas en las instrucciones de funcionamiento, a menos que posea la cualificación necesaria para hacerlo.

<p>Nota para el instalador del sistema</p> <p>En lo que se refiere a este aparato, el blindaje del cable debe conectarse a tierra lo más cerca posible al punto por el cual el cable entra en el edificio. En el caso de los productos vendidos en los EE. UU. y Canadá, el presente aviso se suministra para llamar la atención del instalador del sistema sobre los Artículos 800-93 y 800-100 del NEC (o Código Eléctrico de Canadá, Parte 1), que proporcionan directrices para una correcta conexión a tierra del blindaje del cable.</p>	
 <p>Este símbolo tiene como fin advertirle de que una tensión sin aislamiento en el interior de este producto podría ser de una magnitud suficiente como para provocar una descarga eléctrica. Por consiguiente, resulta peligroso realizar cualquier tipo de contacto con alguno de los componentes internos de este producto.</p>	<p>ATENCIÓN: con el fin de reducir el riesgo de descarga eléctrica, no retire la tapa (ni la parte posterior). No existen en el interior componentes que puedan ser reparados por el usuario. Encargue su revisión a personal de mantenimiento cualificado.</p> <p>ADVERTENCIA PARA EVITAR EL RIESGO DE INCENDIO O DESCARGA ELÉCTRICA, NO EXPONGA LA UNIDAD A LA LLUVIA O A LA HUMEDAD.</p>  <p>Este símbolo tiene como fin alertarle de la presencia de importantes instrucciones de operación y mantenimiento (revisión) contenidas en la literatura que acompaña al producto.</p>

20080814_Installer800_Intl

U.S. Patents

A patent notice is affixed to this product. In addition, the product may also be covered by one or more of the following patents:


4,498,169; 4,692,919; 4,748,667; 4,829,569; 4,866,770; 4,885,775; 4,888,799; 4,890,319; 4,922,456; 4,922,532; 4,924,498; 4,965,534; 4,991,011; 5,003,384; 5,012,510; 5,029,207; 5,045,816; 5,053,883; 5,054,071; 5,058,160; 5,142,575; 5,142,690; 5,146,526; 5,155,590; 5,214,390; 5,225,902; 5,225,925; 5,235,619; 5,237,610; 5,239,540; 5,241,610; 5,247,364; 5,255,086; 5,257,403; 5,267,071; 5,270,809; 5,271,041; 5,272,752; 5,282,028; 5,285,497; 5,287,351; 5,301,028; 5,309,514; 5,317,391; 5,319,709; 5,341,425; 5,347,388; 5,347,389; 5,357,276; 5,359,601; 5,361,156; 5,367,571; 5,379,141; 5,379,145; 5,381,481; 5,390,337; 5,400,401; 5,406,558; 5,418,782; 5,420,866; 5,420,923; 5,425,101; 5,428,404; 5,430,568; 5,434,610; 5,436,749; 5,438,370; 5,440,632; 5,442,472; 5,455,570; 5,457,701; 5,471,492; 5,477,199; 5,477,262; 5,477,282; 5,477,370; 5,481,389; 5,481,542; 5,485,221; 5,493,339; 5,497,187; 5,500,758; 5,502,499; 5,506,904; 5,519,780; 5,539,822; 5,550,825; 5,579,055; 5,579,057; 5,583,562; 5,592,551; 5,596,606; 5,600,378; 5,602,933; 5,640,388; 5,657,414; 5,675,575; 5,684,876; 5,715,515; 5,724,525; 5,734,822; 5,740,300; 5,742,677; 5,754,940; 5,757,416; 5,771,064; 5,774,859; 5,825,829; 5,826,167; 5,850,305; 5,854,703; 5,870,474; 5,892,607; 5,920,626; 5,923,755; 5,930,024; 5,930,515; 5,937,067; 5,963,352; 5,966,163; 5,982,424; 5,991,139; 5,999,207; 6,005,631; 6,005,938; 6,016,163; 6,028,941; 6,029,046; 6,052,384; 6,055,244; 6,072,532; 6,105,134; 6,148,039; 6,157,719; 6,188,729; 6,195,389; 6,212,278; 6,215,530; 6,219,358; 6,240,103; 6,243,145; 6,246,767; 6,252,964; 6,272,226; 6,292,081; 6,292,568; 6,320,131; 6,374,275; 6,405,239; 6,411,602; 6,417,949; 6,424,714; 6,424,717; 6,433,906; 6,438,139; 6,463,586; 6,467,091; 6,476,878; 6,493,876; 6,510,519; 6,516,002; 6,516,412; 6,526,508; 6,538,595; 6,546,013; 6,560,340; 6,567,118; 6,570,888; 6,622,308; 6,629,227; 6,664,984; 6,667,994; 6,671,879; 6,674,967; 6,678,891; 6,714,598; 6,721,352; 6,721,956; 6,725,459; 6,738,982; 6,744,892; 6,744,967; 6,751,271; 6,760,918; 6,795,972; 6,802,077; 6,804,708; 6,811,447; 6,817,028; 6,822,972; 6,823,385; 6,832,386; 6,845,106; 6,868,473; 6,874,075; 6,889,191; 6,909,471; 6,917,622; 6,917,628; 6,922,412; 6,927,806; 6,928,656; 6,931,058; 6,937,729; 6,969,279; 6,971,008; 6,971,121; 6,978,310; 6,986,156; 6,988,900; 6,996,838; 7,010,801; 7,053,960; 7,065,213; 7,069,578; 7,069,572; D348065; D354959; D359737; D363932; D390217; D434753; D507240; D507535; D513407; D516518; RE36368; RE36988

20070417 Patents

IMPORTANT SAFETY INSTRUCTIONS

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

IMPORTANT SAFETY INSTRUCTIONS

- 10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11) Only use attachments/accessories specified by the manufacturer.
-  12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- 13) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as a power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Power Source Warning

A label on this product indicates the correct power source for this product. Operate this product only from an electrical outlet with the voltage and frequency indicated on the product label. If you are uncertain of the type of power supply to your home or business, consult your service provider or your local power company.

The AC inlet on the unit must remain accessible and operable at all times.

Ground the Product



WARNING: Avoid electric shock and fire hazard! If this product connects to coaxial cable wiring, be sure the cable system is grounded (earthed). Grounding provides some protection against voltage surges and built-up static charges.



WARNING: Avoid electric shock and fire hazard! Do not locate an outside antenna system in the vicinity of overhead power lines or power circuits. Touching power lines or circuits might be fatal.

Protect the Product from Lightning

In addition to disconnecting the AC power from the wall outlet, disconnect the signal inputs.

Verify the Power Source from the On/Off Power Light

When the on/off power light is not illuminated, the apparatus may still be connected to the power source. The light may go out when the apparatus is turned off, regardless of whether it is still plugged into an AC power source.

Eliminate AC Mains Overloads



WARNING: Avoid electric shock and fire hazard! Do not overload AC mains, outlets, extension cords, or integral convenience receptacles. For products that require battery power or other power sources to operate them, refer to the operating instructions for those products.

Provide Ventilation and Select a Location

- Remove all packaging material before applying power to the product.
- Do not place this apparatus on a bed, sofa, rug, or similar surface.
- Do not place this apparatus on an unstable surface.
- Do not install this apparatus in an enclosure, such as a bookcase or rack, unless the installation provides proper ventilation.
- Do not place entertainment devices (such as VCRs or DVDs), lamps, books, vases with liquids, or other objects on top of this product.
- Do not block ventilation openings.

Protect from Exposure to Moisture and Foreign Objects



WARNING: Avoid electric shock and fire hazard! Do not expose this product to liquids, rain, or moisture. Do not expose this product to dripping or splashing liquids, rain, or moisture. Objects filled with liquids, such as vases, should not be placed on this apparatus.



WARNING: Avoid electric shock and fire hazard! Unplug this product before cleaning. Do not use a liquid cleaner or an aerosol cleaner. Do not use a magnetic/static cleaning device (dust remover) to clean this product.



WARNING: Avoid electric shock and fire hazard! Never push objects through the openings in this product. Foreign objects can cause electrical shorts that can result in electric shock or fire.

Service Warnings



WARNING: Avoid electric shock! Do not open the cover of this product. Opening or removing the cover may expose you to dangerous voltages. If you open the cover, your warranty will be void. This product contains no user-serviceable parts.

Check Product Safety

Upon completion of any service or repairs to this product, the service technician must perform safety checks to determine that this product is in proper operating condition.

Protect the Product When Moving It

Always disconnect the power source when moving the apparatus or connecting or disconnecting cables.

Telephone Equipment Notice

When using your telephone equipment, basic safety precautions should always be followed to reduce the risk of fire, electric stock and injury to persons, including the following:

1. Do not use this product near water, for example, near a bath tub, wash bowl, kitchen sink or laundry

IMPORTANT SAFETY INSTRUCTIONS

tub, in a wet basement or near a swimming pool.

2. Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.
3. Do not use the telephone to report a gas leak in the vicinity of the leak.

SAVE THESE INSTRUCTIONS

20081112_Modem DSL_Safety

FCC Compliance

United States FCC Compliance

This device has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against such interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy. If not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment OFF and ON, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the service provider or an experienced radio/television technician for help.

Any changes or modifications not expressly approved by Cisco Systems, Inc., could void the user's authority to operate the equipment.

The information shown in the FCC Declaration of Conformity paragraph below is a requirement of the FCC and is intended to supply you with information regarding the FCC approval of this device. *The phone numbers listed are for FCC-related questions only and not intended for questions regarding the connection or operation for this device. Please contact your service provider for any questions you may have regarding the operation or installation of this device.*

Declaration of Conformity

This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions: 1) the device may not cause harmful interference, and 2) the device must accept any interference received, including interference that may cause undesired operation.

<p>DDR2201 Residential Gateway Model: DDR2201 Manufactured by: Cisco Systems, Inc. 5030 Sugarloaf Parkway Lawrenceville, Georgia 30044 USA Telephone: 770-236-1077</p>
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Canada EMI Regulation

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la class B est conforme à la norme NMB-003 du Canada.

FCC Compliance

FCC Part 68

The Federal Communications Commission (FCC) of the United States restricts specific uses of modems, and places registration responsibilities on both the manufacturer and the individual user.

- 1 The modem may not be connected to a party line or to a coin-operated telephone.
- 2 Notification to the telephone company is no longer required prior to connecting registered equipment, but upon request from the telephone company, the user shall tell the telephone company which line the equipment is connected to as well as the registration number and ringer equivalence number of the registered protective circuitry. FCC information is printed on a label on the bottom of the modem.

IC (Industry Canada) Notice

Notice: The Industry Canada (formerly Canadian Department of Communications) label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational, and safety requirements. The department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the company's inside wiring associated with a single-line individual service may be extended by means of a certified connector assembly (telephone extension cord). The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user may give the telecommunications company cause to request the user to disconnect the equipment. Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.



CAUTION:

Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

Radiation Exposure Statements

Note: This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter. This equipment should be installed and operated with a minimum distance of 7.9 inches (20 cm) between the radiator and your body.

US

This system has been evaluated for RF exposure for humans in reference to ANSI C 95.1 (American National Standards Institute) limits. The evaluation was based on evaluation per ANI C 95.1 and FCC OET Bulletin 65C rev 01.01. The minimum separation distance from the antenna to general bystander is 7.9 inches (20 cm) to maintain compliance.

Canada

This system has been evaluated for RF exposure for humans in reference to ANSI C 95.1 limits. The evaluation was based on evaluation per RSS-102 Rev 2. The minimum separation distance from the antenna to general bystander is 7.9 inches (20 cm) to maintain compliance.

EU

This system has been evaluated for RF exposure for humans in reference to the ICNIRP (International Commission on Non-Ionizing Radiation Protection) limits. The evaluation was based on the EN 50385 Product Standard to Demonstrate Compliance of Radio Base Stations and Fixed Terminals for Wireless Telecommunications Systems with basic restrictions or reference levels related to Human Exposure to Radio Frequency Electromagnetic Fields from 300 MHz to 40 GHz. The minimum separation distance from the antenna to general bystander is 20 cm (7.9 inches).

Australia

This system has been evaluated for RF exposure for humans as referenced in the Australian Radiation Protection standard and has been evaluated to the ICNIRP (International Commission on Non-Ionizing Radiation Protection) limits. The minimum separation distance from the antenna to general bystander is 20 cm (7.9 inches).

20081121 FCC DSL_Dom and Intl

FCC REQUIREMENTS

This equipment complies with Part 68 of FCC Rules and the requirements adopted by the ACTA.. On the bass unit of this equipment is a label that contains, among other information, a product identifier in the format US: GEMDL01BDDR2201V1. If requested, this number must be provided to the telephone company.

The REN is useful to determine the quantity of devices you may connect to your telephone line and still have those devices ring when your telephone number is called. In most, but not all areas, the sum of the REN of all devices connected to one line should not exceed five (5.0). To be certain of the number of devices you may connect to your line, as determined by the REN, you should contact your local telephone company to determine the maximum REN for your calling area.

If your equipment causes harm to the telephone network, the telephone company may discontinue your service temporarily. If possible, they will notify you in advance. If advance notice is not practical, you will be notified as soon as possible. You will be informed of your right to file a complaint with the FCC. Your telephone company may make changes in its facilities, equipment, operations or procedures that could affect the proper functioning of your equipment. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service.

If you experience trouble with this telephone equipment, please contact the following address and phone number for information on obtaining service or repairs:

The telephone company may ask that you disconnect this equipment from the network until the problem has been corrected or until you are sure that the equipment is not malfunctioning. This equipment may not be used on coin service provided by the telephone company. Connection to party lines is subject to state tariffs.

About This Guide

Introduction

This installation and operation guide applies to the DDR2201 series residential gateway. The DDR2201 series residential gateway connects to the DSL network in your home to deliver data, video, voice, and wired (Ethernet) or wireless gateway capabilities all from one device. Use this guide to install the residential gateway in your home.

Purpose

This document provides the information you need to install and operate the DDR2201 series residential gateway.

Audience

This guide is written for two audiences. Subscribers who have purchased a residential gateway and want to experience high-speed Internet and high-quality digital telephone service can use this guide for background information and basic operation. This guide is also written for the the service provider's installers who initially set up and configure residential gateway in the subscriber's home. Most subscribers will not want to use the more advanced functionality, and future releases of this software will prevent subscriber access to these screens.

Document Version

This is the first formal release of this document.

1

Introducing the DDR2201 Series Residential Gateway

Introduction

Imagine walking through your home and accessing the Internet from nearly any room. The DDR2201 series residential gateway connects to the DSL line in your home and to your home network to deliver data, video, voice, and wired (Ethernet) or wireless gateway capabilities all from one device. You can use your residential gateway to connect to a variety of devices in the home or small office. The residential gateway supports high-speed data access, VoIP services, and features that support Internet Protocol TV (IPTV) deployment. Use this chapter to learn about your residential gateway.

In This Chapter

- Benefits and Features 2
- What's On the Front Panel? 4
- What's On the Back Panel? 6

Benefits and Features

Your residential gateway offers the following benefits and features:

Full routing functionality. The gateway router provides broadband transfer speeds available between your home network and the service provider's network for multi-user sharing. The high-performance router distributes data seamlessly to all devices in the network without a noticeable effect to performance or speed.

True firewall capability. The gateway firewall includes both standard NAT/PAT security and Stateful Packet inspection to defend against external attacks.

High-quality data, voice, and IPTV services. The gateway combines an ADSL2+ bonded modem, 4-port Ethernet switch, HPNA 3.0 bridge and router functionality with optional VoIP and WiFi into one integrated platform.

Compact design. The gateway is compact enough to sit on a desktop and versatile enough to be wall mounted in an out of the way location. The residential gateway can also stand vertically.

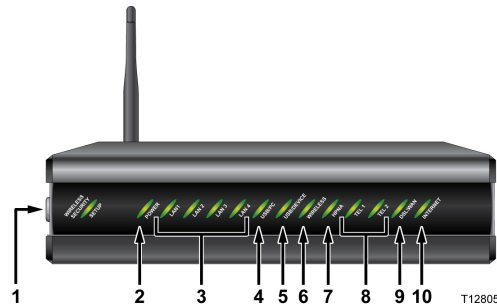
Flexible networking. The gateway combines a variety of home networking technologies in one box: Ethernet, USB, 802.11g wireless, and HPNA.

- **Ethernet.** Ethernet is a network standard for data transmission using either coaxial or twisted pair cable over a LAN (local area network). The information can be transmitted at speeds of 10 to 100 Mbps. If the home or office is wired for Ethernet, use one of the four LAN interfaces on the gateway to create a broadband network.
- **USB.** The USB port allows you to directly connect a computer or other network capable device.
- **802.11g Wireless.** The gateway includes an integrated wireless access point that allows you to roam wirelessly throughout your home or office. With the high-power wireless technology of the DDR2201, wireless "coldspots" are virtually eliminated in the home.
- **HPNA.** The HPNA interface allows you to easily share digital services throughout the home using the existing coaxial cable to distribute content such as video, music, and games. HPNA offers the following benefits:
 - **Multi-room DVR.** Subscribers can record and share digital services simultaneously in every room.
 - **Multi-room gaming.** Subscribers can access games from various locations in the home and play simultaneously.
 - **PC to TV.** Subscribers can access data and video services over the HPNA coaxial network throughout the home.

ADSL2+. Asymmetric Digital Subscriber Line (ADSL) provides high-access transmission speeds for delivery of video, voice, and data services to homes over ordinary copper telephone wire.

What's On the Front Panel?

The front panel of your residential gateway provides LED status indicators that indicate the operational state of your gateway. Refer to the following diagram for a description of the front panel.



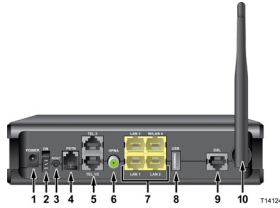
- 1 **wifi-sec** – Allows you to automatically configure the wireless device in the home. The WIRELESS SECURITY SETUP LED shows whether automatic wireless security is on or off
- 2 **POWER** – Illuminates solid green to indicate that AC power is being applied to the residential gateway
- 3 **LAN1 - LAN4** – Illuminates solid green to indicate that an Ethernet carrier is present and blinks to indicate that Ethernet data is being transferred between the PC and the residential gateway
- 4 **USB/PC** – Illuminates solid green to indicate that a USB carrier is present and blinks to indicate that USB data is being transferred between the PC and the residential gateway
- 5 **USB/DEVICE** – Illuminates solid green to indicate that a USB carrier is present and blinks to indicate that USB data is being transferred between the connected USB device and the residential gateway
- 6 **WIRELESS** – Illuminates solid green when the wireless access point is enabled and operational and blinks to indicate that wireless data is being transferred between the PC and the residential gateway. The LED is off when the wireless access point is disabled by the user
- 7 **HPNA** – Illuminates solid when linked to another HPNA device and blinks when HPNA activity occurs
- 8 **TEL 1 and TEL 2** – TEL 1 illuminates solid green when telephony service is enabled. Blinks when line 1 is in use. TEL2 illuminates solid green when telephony service is enabled. Blinks when line 2 is in use
- 9 **DSL/WAN** – Indicates whether a DSL signal is acquired (or trained). The LED indicators mean the following status:
 - Off. Not trained.
 - Blinking. In training.
 - Solid. Trained.

10 INTERNET – Indicates wide area network (WAN) traffic. The LED indicators mean the following status:

- Solid. IP is connected.
- Blinking. WAN interface has activity.
- Off. No Internet connection.

What's On the Back Panel?

Refer to the following diagram for a description of the back panel components.



Important! Do not connect your PC to both the Ethernet and USB ports at the same time. Your modem will not function properly if both the Ethernet and USB ports are connected to your PC at the same time.

- 1 **POWER** – Connects the residential gateway to the AC power plug that is provided with your residential gateway
- 2 **On and Off Switch** – Powers the residential gateway on and off
- 3 **RESET** – Activating this switch resets the residential gateway. Pressing this switch for more than 10 seconds resets the device to factory default values and resets the residential gateway
- 4 **PSTN** – Connects to the home telephone wiring and is used as a backup to voice over IP (VoIP) service in the event of a power outage to the residential gateway
- 5 **TEL 1 and TEL 2** – RJ-11 telephone ports connect to home telephone wiring to conventional telephones or fax machines
- 6 **HPNA** – Connects to the coaxial cable wiring in the house for data and video distribution
- 7 **LAN 1-LAN 3 W/LAN 4** – Four RJ-45 Ethernet ports connect as follows:
 - LAN 1 through 3 connect to the Ethernet port on your PC or your home network
 - W/LAN 4 connects to the Ethernet port on your PC if used as a LAN port or optionally as an Ethernet wide area network (WAN) port that connects to the service provider network
- 8 **USB DEVICE** – 12 Mbps USB port connects to the USB port on your device such as a flash drive or digital camera
- 9 **DSL** – RJ-11 port connects to the DSL line from the service provider
- 10 **ANTENNA** – Receives and transmits data packets to wireless devices

2

Installing the Residential Gateway

You can install the residential gateway in your home office and access the Internet from your kitchen computer to get your favorite recipe. Use this chapter to properly install your residential gateway and to connect the residential gateway to your computer and other devices in your home.

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- Mounting the Residential Gateway Vertically 8
- Mounting the Residential Gateway to the Wall 9
- Connecting Your Computer to the Residential Gateway..... 10
- Connecting the DSL Interface 12

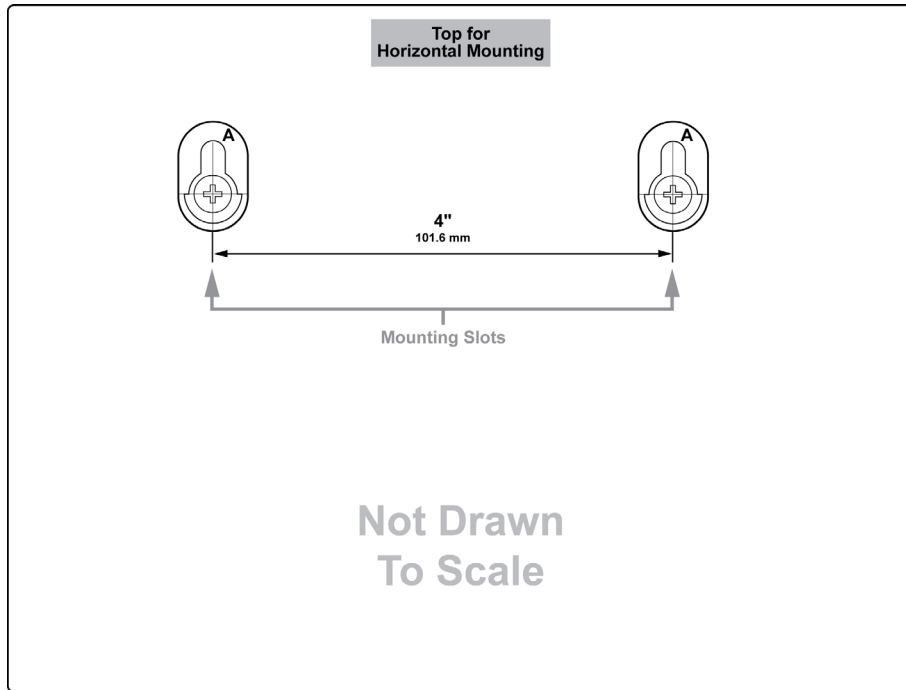
Mounting the Residential Gateway Vertically

Some installations may require that you place the residential gateway in a vertical position. Use proper care when installing the residential gateway in a vertical position. Be sure that the housing of the residential gateway is vertical and that the stand is extended as shown in the following illustration:



Mounting the Residential Gateway to the Wall

The following illustration shows the location and dimensions of the wall-mounting slots on the bottom of the residential gateway. Use the information on this page as a guide for mounting your residential gateway to the wall.



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Connecting Your Computer to the Residential Gateway

You can connect a computer to the residential gateway using one of the following methods:

Ethernet Connection

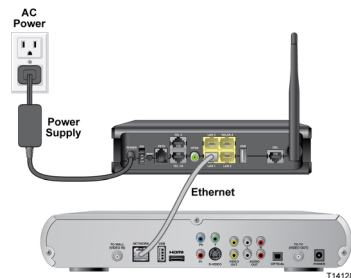
Wireless Connection

Note: These instructions describe a PC connection. You could also connect another type of device with a wireless interface. See the owner's manual that came with the device for instructions.

Connecting the Computer with an Ethernet Connection

Complete these steps to connect the computer with an Ethernet connection.

- 1 Connect the power adapter that came with the residential gateway to the POWER port on the residential gateway and to an electrical outlet.
- 2 Power on the residential gateway. After the residential gateway has completed its startup process, the POWER LED on the front panel of the residential gateway should be green.
- 3 Connect the Ethernet cable provided with the residential gateway from any available Ethernet port (LAN 1 through LAN 4) on the gateway to the Ethernet port on the computer.
- 4 Connect the gray cable provided with the residential gateway from the DSL port on the gateway to a telephone wall jack. See *Connecting the DSL Interface* (on page 12) for more information.

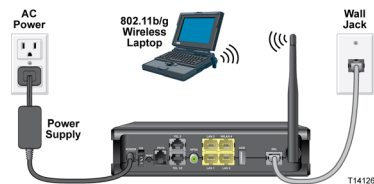


Connecting the Computer with a Wireless Connection

A wireless connection requires a wireless-enabled notebook or a computer with an 802.11b/g wireless network adapter installed.

Complete these steps to connect the computer with a wireless connection.

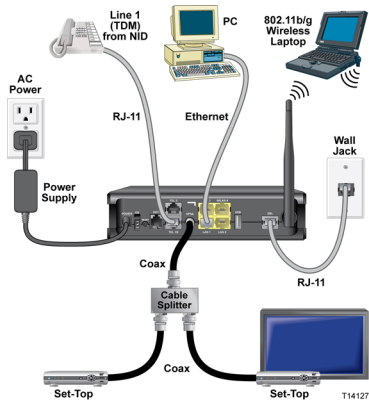
- 1 Connect the power adapter that came with the residential gateway to the POWER port on the residential gateway and to an electrical outlet.
- 2 Power on the residential gateway. After the residential gateway has completed its startup process, the POWER light on the front panel of the residential gateway should be green.
- 3 Connect the gray cable provided with the residential gateway from the DSL port on the residential gateway to a telephone wall jack. See *Connecting the DSL Interface* (on page 12) for more information.
- 4 Follow the instructions in your owner's manual for your PC or laptop to activate the wireless connection.



Chapter 2 Installing the Residential Gateway

Connecting the DSL Interface

Now that you have connected the gateway to power and you have made the LAN connections, you can connect the DSL interface (connection to the wall jack) as shown in the following illustration. This illustration shows all of the attached devices connected to the residential gateway.

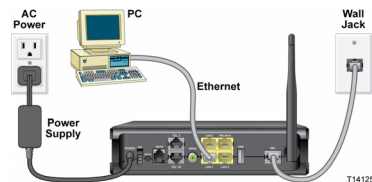


For IPTV service, you must connect the residential gateway to an IP set-top. You can connect to an IP set-top using an Ethernet or coaxial connection.

Ethernet Connection

Complete the following steps to connect the residential gateway to an IP set-top through Ethernet for IPTV service.

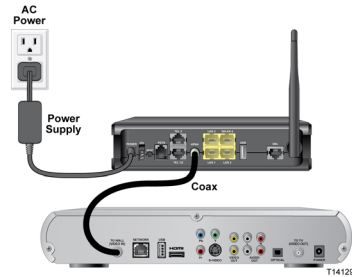
- 1 Ensure that the residential gateway is powered on.
- 2 Connect an Ethernet cable from the Ethernet port (LAN 1 through LAN 4) on the gateway to the Network port on the set-top.
- 3 Power on the IP set-top.



Coaxial Connection

Complete the following steps to connect the residential gateway to an IP set-top with coaxial cable for IPTV service.

- 1 Ensure that the residential gateway is powered on.
- 2 Connect a coaxial cable from the HPNA port on the gateway to the TO WALL (Video In) port on the set-top.
- 3 Power on the IP set-top.



3

Configuration and Operation

The DDR2201 residential gateway contains web pages that show the current status of the residential gateway and that allow you to configure the device. Advanced users can configure parameters such as DHCP (Dynamic Host Configuration Protocol), wireless network settings, port forwarding, parental control, and so forth. This section provides information that you can use to configure and interact with the residential gateway through the user interface. The screens shown in this guide represent the default values for the device.

Use this chapter to help you check the status of the residential gateway and to configure the device.

In This Chapter

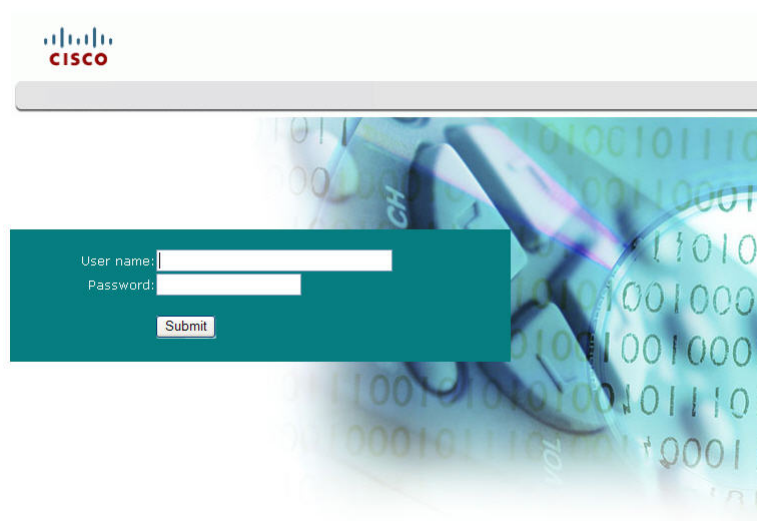
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Logging In to the Residential Gateway

The default configuration of the residential gateway uses IP address 192.168.1.254. If you have connected the residential gateway correctly and you have properly configured your computer, use the following steps to log in to the residential gateway as an administrator.

Note: A non-administrative user may need a different user name and password for logging in to the residential gateway. These users can access non-privileged information.

- 1 On your PC, open the web browser that you prefer to use.
- 2 In the address field, enter the following IP address: 192.168.1.254. The system prompts you to enter your user name and password.



- 3 Enter **admin** for both the user name and password. The residential gateway opens with the System Summary page in the forefront. You can use this web interface to check the status of the residential gateway and to configure parameters.

Note: The screens shown in this guide represent the default values for the device.

System Summary

The System Summary screen provides a summary of the software used by the residential gateway and indicates the current status of the DSL connection. You can use this screen to find hardware and software information as well as physical and IP layer information.

The LogOut button on this screen allows you to quickly log out and log back in without opening a browser.

Path: System > Summary

Q. to reviewers: Need User Interface with Setup Wizard removed.

System Summary

Device Info

Model Name	DDR2201v1
Manufacturer	Cisco
Serial Number :	AAD061100007
Software Version:	DDR2201v1-NA-AnnexA-FCC-V00.00.01.07
Hardware Version :	V06
LAN MAC Address :	00:1e:6b:fa:9c:da
WAN MAC Address :	00:1e:6b:fa:9c:da

Connection

LAN IP Address:	192.168.1.254
Default Gateway:	
Primary DNS Server:	192.168.1.254
Secondary DNS Server:	192.168.1.254
Line Rate - Upstream:	
Line Rate - Downstream:	

Admin

System Uptime:	0 min
System date and time	Sat Jan 1 00:00:37 UTC 2000 <input type="button" value="NTP Server Setting"/>
System password	<input type="button" value="Password Setting"/>

Log Out

Setting Up Your System with the Setup Wizard

The Setup Wizard is a step-by-step sequence to set up your residential gateway for the first time to ensure proper operation. The wizard combines the various tasks into one convenient tool to reduce configuration time. The wizard requires that you make a few selections along the process. Your selections will depend on your service provider.

To set up your system with the Setup Wizard, complete the following steps.

- 1 Click **System** on the main screen. The System Summary window opens.



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- 2 Click **Setup Wizard** at the top of the screen. The (Setup Wizard 1/4) ----- Clone MAC screen opens.

(Setup Wizard 1/4) ----- Clone MAC

This page allows you to enable / disable clone MAC function.

Enable clone MAC address.

Next

- 3 Do you want to enable the clone MAC function? MAC cloning enables you to change the MAC address of the residential gateway to match the MAC address of your PC or any service provider supplied MAC address. If you do not enable MAC cloning, the default MAC address of the residential gateway is used.
 - If **yes**, select the **Enable clone MAC address** check box. A field appears for you to enter the MAC address you want to clone. Go to step 4.

(Setup Wizard 1/4) ----- Clone MAC

This page allows you to enable / disable clone MAC function.

Enable clone MAC address.

MAC Address 00:10:60:03:9F:33 Load client PC MAC

Next

- If **no**, clear the Enable clone MAC address check box. Go to step 5.
- 4 In the MAC address field, type in a MAC address or click **Load client PC MAC** to load your PC's MAC address.

Setting Up Your System with the Setup Wizard

- 5 Click **Next**. The (Setup Wizard 2/4 ----- Time Settings) screen opens. This screen lets you synchronize the time on the residential gateway with an Internet time server. If you do not synchronize the time with an Internet time server, the residential gateway will use its default time.

(Setup Wizard 2/4) ----- Time Settings

This page allows you to set the time configuration for the residential gateway

Automatically synchronize with Internet time servers

First NTP time server: clock.fmt.he.net

Second NTP time server: time.nist.gov

Time zone: (GMT-07:00) British Columbia

offset:

Next

- 6 Do you want to automatically synchronize the time on the residential gateway with an Internet Time server?
- If yes, select the Automatically synchronize with Internet time servers check box. Go to step 7.
 - If no, clear the Automatically synchronize with Internet time servers check box. The residential gateway will get its time from its own internal clock. Go to step 9.
- 7 In the First NTP time server field, select the Network Time Protocol (NTP) time server from the drop-down list that you want the residential gateway to check first to get its time.
- 8 In the Second NTP time server field, select the time server from the drop-down list that you want the to use as a backup server for the residential gateway to get its time.
- 9 In the Time zone offset field, select your time zone from the drop-down list.

Chapter 3 Configuration and Operation

- 10 Click **Next**. The (Setup Wizard 3/4) ----- Wireless Basic Settings screen opens. The residential gateway offers wireless capability by default. This screen allows you to configure the wireless settings to work with the devices in your environment.

(Setup Wizard 3/4) ----- Wireless Basic Settings

Click "Apply" to configure the basic wireless options.

Enable Wireless

Hide Access Point

SSID:

Channel:

BSSID: 00:18:68:FF:42:87

Wireless Mode:

54g Protection:

- 11 Do you want to enable wireless?
- If **yes**, select the Enable Wireless check box.
 - If **no**, clear the Enable Wireless check box. The wireless capability of the residential gateway is disabled, and all devices communicating with rg will have to be hard wired.
- 12 Do you want to prevent other wireless devices from communicating over the wireless network with the residential gateway?
- If **yes**, select the Hide Access Point check box.
 - If **no**, clear the Hide Access Point check box. No devices will be locked out from communicating with the residential gateway over the wireless network.
- 13 In the SSID field, enter the service set identifier (SSID).
- 14 In the channel field, select the channel from the drop-down list to select the frequency that you will use for wireless communication. Values are auto and channels 1 through 11.
- 15 In the Wireless Mode field, select one of the following modes:
- 802.11g & 802.11b

- 802.11g only
 - 802.11b only
- 16** In the 54g Protection field, select Auto to enable 54g protection or Off to disable the function. The Auto option will use RTS/CTS to improve 802.11g performance in mixed 802.11g/802.11b networks. Turning the protection off maximizes 802.11g throughput under most conditions.
- 17** Click **Next**. The (Setup Wizard 4/4) ----- Wireless Security Settings screen opens.

The screenshot shows a configuration window titled "(Setup Wizard 4/4) ----- Wireless Security Settings". It features three dropdown menus for configuration: "Select SSID:" is set to "SciAll", "Network Authentication:" is set to "Open", and "WEP Encryption:" is set to "Disabled". A "Save/Reboot" button is positioned at the bottom center of the window.

- 18** In the Select SSID field, select the SSID from the drop-down list that you want to use.
- 19** In the Network Authentication field, select one of the following authentication methods from the drop-down list:
- Open. All devices may access the wireless network. (Preferred Option).
 - Shared. Only devices configured with the 64 bit or 128 Bit Key may access the wireless network.
 - WPA-PSK. (Wi-Fi Protected Access-Pre-Shared Key) will secure your network by encryption of all traffic using a pre-shared dynamic key.
- 20** Do you want to enable WEP Encryption?
- If **yes**, in the WEP Encryption field, select **Enabled** from the drop-down list.
 - If **no**, in the WEP Encryption field, select **Disabled** from the drop-down list.
- 21** Click Save/Reboot to save the changes you made. Need more detail on result. What happens.

Setting System Date and Time

When you first set up your system with the wizard, you set your systems date and time. At a later time, you may need to reset the date and time, and you can use the following procedure.

To set the system date and time, complete the following steps.

- 1 Click **System** on the main screen. The System Summary window opens.
- 2 Under the Admin section on the screen, click **NTP Server Setting**. The Time Settings screen opens.



The screenshot shows a web interface titled "Time Settings". It contains the following elements:

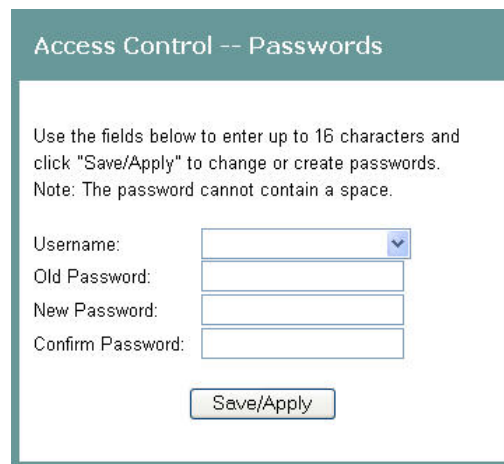
- A header bar with the title "Time Settings".
- A sub-header: "This page allows you to set the time configuration for the residential gateway".
- A checked checkbox: "Automatically synchronize with Internet time servers".
- Two NTP time server fields:
 - "First NTP time server:" with a dropdown menu showing "clock.fmt.he.net".
 - "Second NTP time server:" with a dropdown menu showing "time.nist.gov".
- A "Time zone offset:" field with a dropdown menu showing "(GMT-07:00) British Columbia".
- A "Save/Apply" button at the bottom center.

- 3 Make sure the Automatically synchronize with Internet time servers check box is checked.
- 4 In the **First NTP time server** field, select clock.fmt.he.net from the drop-down list.
- 5 In the **Second NTP time server** field, select time.nist.gov from the drop-down list.
- 6 In the Time zone offset field, select the time zone that you want to use from the drop-down list.
- 7 Click **Save/Apply** to save your settings.

Setting Password

To set the password for the residential gateway, complete the following steps.

- 1 Click **System** on the main screen. The System Summary window opens.
- 2 Under the Admin section on the screen, click **Password Setting**. The Access Control -- Password screen opens.



Access Control -- Passwords

Use the fields below to enter up to 16 characters and click "Save/Apply" to change or create passwords.
Note: The password cannot contain a space.

Username:

Old Password:

New Password:

Confirm Password:

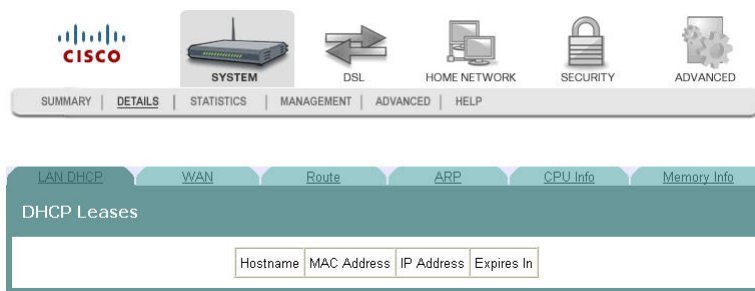
- 3 In the Username field, select one of the following options for the user name:
 - admin. Allows unrestricted access to change and view the configuration of the residential gateway. This login allows access to privileged information.
 - support. Allows an ISP technician to access your residential gateway for maintenance and to run diagnostics
 - user. Allows access to view configuration settings and statistics, as well as, to update the residential gateway's software.
- 4 In the **Old Password** field, enter the old password you have been using.
- 5 In the **New Password** field, enter the new password.
- 6 In the **Confirm Password** field, enter the new password again to confirm it.
- 7 Click **Save/Apply** to save your user name and password.

DHCP Leases

The DHCP Leases screen displays the Dynamic Host Configuration Protocol (DHCP) table. This screen shows a mapping of hosts (shown by their MAC addresses) and their assigned IP addresses. The DHCP server for the residential gateway assigns these IP addresses to the devices. The screen also shows when the lease for the IP address expires.

Path: System > Details > LAN DHCP

Q. to Reviewers: We need a populated screen



WAN Information

The WAN Info screen provides information about the ADSL2+ wide area network (WAN) parameters and status. You can use this screen to check the ADSL2+ connection.

Path: System > Details > WAN

VPI/VCI	Con. ID	Category	Service	Interface	Protocol	Igmp	QoS	State	Status	IP Address	
0/8/35	1	UBR	mer_0_8_35	nas_0_8_35	MER	Disabled	Disabled	Disabled	Disabled	Disabled	24.56.187.2

Route Information

The Route Info screen shows the routing table for the residential gateway. This screen provides the gateway address for specific destination IP addresses.

Path: System > Details > Route

Navigation bar: SUMMARY | DETAILS | STATISTICS | MANAGEMENT | ADVANCED | HELP

Menu tabs: DHCP Info | WAN | Route | ARP | CPU Info | Memory Info

Route Info

Flags: U - up, I - reject, G - gateway, H - host, R - reinstate
 D - dynamic (redirect), M - modified (redirect).

Destination	Gateway	Subnet Mask	Flag	Metric	Service	Interface
192.168.1.0	0.0.0.0	255.255.255.0	U	0		br0

ARP Information

The ARP Info screen displays the address resolution protocol (ARP) table. This table shows the IP address to MAC address mapping.

Path: System > Details > ARP

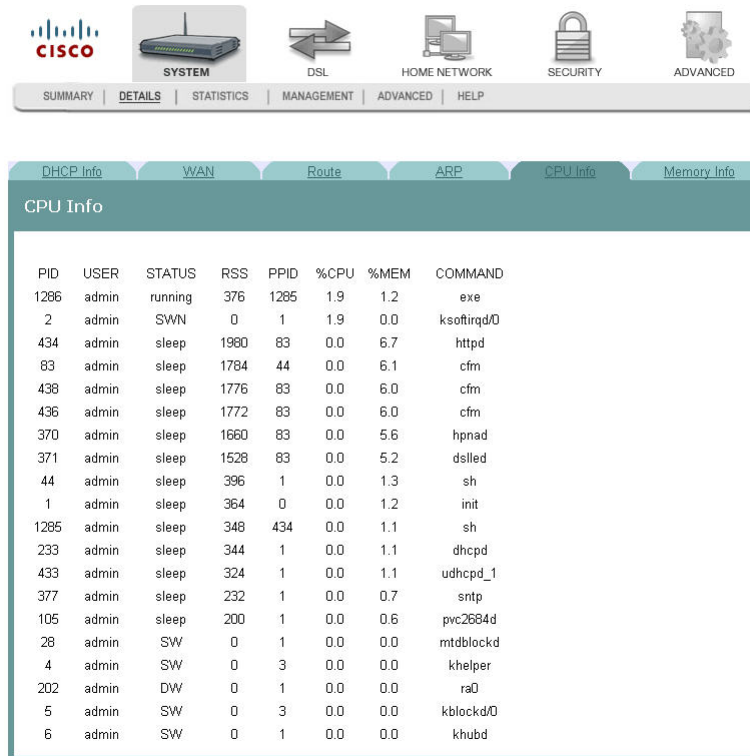
The screenshot shows the Cisco configuration interface. At the top, there are icons for SYSTEM, DSL, HOME NETWORK, SECURITY, and ADVANCED. Below these is a navigation bar with links for SUMMARY, DETAILS, STATISTICS, MANAGEMENT, ADVANCED, and HELP. The main content area has tabs for DHCP Info, WAN, Route, ARP, CPU Info, and Memory Info. The ARP Info tab is selected, displaying a table with the following data:

IP Address	Flags	HW Address	Device
192.168.1.4	Complete	00:10:60:03:9F:33	br0

CPU Information

CPU Info screen shows detailed information about the CPU utilization and the active processes running on the residential gateway.

Path: System > Details > CPU Info

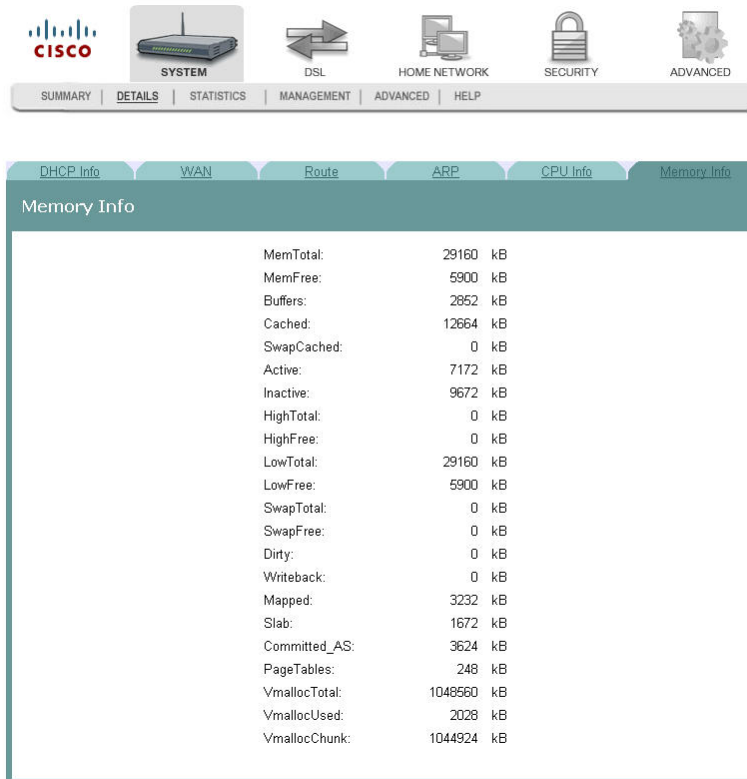


PID	USER	STATUS	RSS	PPID	%CPU	%MEM	COMMAND
1286	admin	running	376	1285	1.9	1.2	exe
2	admin	SWN	0	1	1.9	0.0	ksoftirqd/0
434	admin	sleep	1980	83	0.0	6.7	httpd
83	admin	sleep	1784	44	0.0	6.1	cfm
438	admin	sleep	1776	83	0.0	6.0	cfm
436	admin	sleep	1772	83	0.0	6.0	cfm
370	admin	sleep	1660	83	0.0	5.6	hpnad
371	admin	sleep	1528	83	0.0	5.2	dsllcd
44	admin	sleep	396	1	0.0	1.3	sh
1	admin	sleep	364	0	0.0	1.2	init
1285	admin	sleep	348	434	0.0	1.1	sh
233	admin	sleep	344	1	0.0	1.1	dhcpcd
433	admin	sleep	324	1	0.0	1.1	udhcpcd_1
377	admin	sleep	232	1	0.0	0.7	snmp
105	admin	sleep	200	1	0.0	0.6	pwc2684d
28	admin	SW	0	1	0.0	0.0	mtddblockd
4	admin	SW	0	3	0.0	0.0	khelper
202	admin	DW	0	1	0.0	0.0	rad
5	admin	SW	0	3	0.0	0.0	kblockd/0
6	admin	SW	0	1	0.0	0.0	khubd

Memory Information

The Memory Info screen shows the detailed memory availability of the residential gateway.

Path: System > Details > Memory Info



Memory Statistic	Value	Unit
MemTotal:	29160	kB
MemFree:	5900	kB
Buffers:	2852	kB
Cached:	12664	kB
SwapCached:	0	kB
Active:	7172	kB
Inactive:	9672	kB
HighTotal:	0	kB
HighFree:	0	kB
LowTotal:	29160	kB
LowFree:	5900	kB
SwapTotal:	0	kB
SwapFree:	0	kB
Dirty:	0	kB
Writeback:	0	kB
Mapped:	3232	kB
Slab:	1672	kB
Committed_AS:	3624	kB
PageTables:	248	kB
VmallocTotal:	1048560	kB
VmallocUsed:	2028	kB
VmallocChunk:	1044924	kB

LAN Statistics

The Statistics -- LAN screen displays statistics for the local area network (LAN). This screen shows the number of transmitted and received packets on the LAN interface for Ethernet, USB, and wireless devices.

Path: System > Statistics > LAN

The screenshot shows the Cisco configuration interface for LAN Statistics. The navigation bar includes icons for SYSTEM, DSL, HOME NETWORK, SECURITY, and ADVANCED. Below the navigation bar is a menu with options: SUMMARY, DETAILS, STATISTICS (selected), MANAGEMENT, ADVANCED, and HELP. The main content area shows tabs for LAN, WAN, and ATM. The LAN tab is active, displaying a table of statistics for various interfaces.

Interface	Received				Transmitted			
	Bytes	Pkts	Errs	Drops	Bytes	Pkts	Errs	Drops
Ethernet LAN(1-4)	0	0	0	0	167632	2507	0	0
Ethernet eth0	0	0	0	0	163194	2516	0	0
USB	0	0	0	0	0	0	0	0
Wireless	0	0	0	0	152604	2508	0	0

Reset Statistics

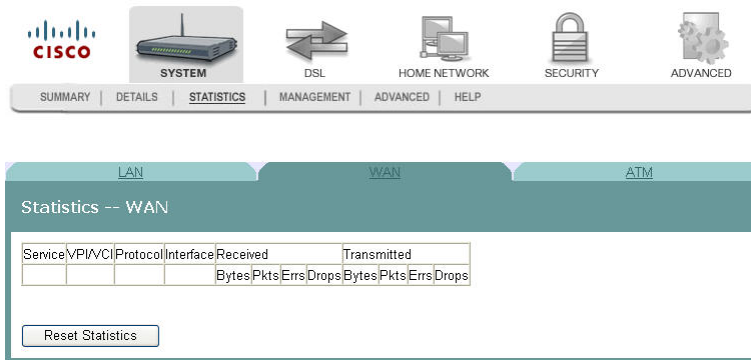
Reset Statistics

To reset the statistics, click **Reset Statistics** on the screen. This action clears the counters and sets them to zero for the packets received and transmitted on the LAN interface.

WAN Statistics

The Statistics -- WAN screen displays statistics for the devices and interfaces on the wide area network (WAN). This screen shows the number of transmitted and received packets for the DSL WAN interface.

Path: System > Statistics > WAN



Reset Statistics

To reset the statistics, click **Reset Statistics** on the screen. This action clears the counters and sets them to zero for the packets received and transmitted on the WAN interface.

ATM Statistics

The Statistics -- ATM screen displays statistics on the ATM interface. This screen shows the ATM Layer-2 statistics such as the number of ATM cells transmitted and received over the ATM interface.

Path: System>Statistics>ATM

ATM Interface Statistics

In Octets	Out Octets	In Errors	In Unknown	In Hec Errors	In Invalid Vpi Vci Errors	In Port Not Enable Errors	In PTI Errors	In Idle Cells	In Circuit Type Errors	In OAM RM CRC Errors	In GFC Errors
0	0	0	0	0	0	0	0	0	0	0	0

AAL5 Interface Statistics

In Octets	Out Octets	In Ucast Pkts	Out Ucast Pkts	In Errors	Out Errors	In Discards	Out Discards
0	0	0	0	0	0	0	0

AAL5 VCC Statistics

VPI/VCI	CRC Errors	SAR Timeouts	Oversized SDUs	Short Packet Errors	Length Errors

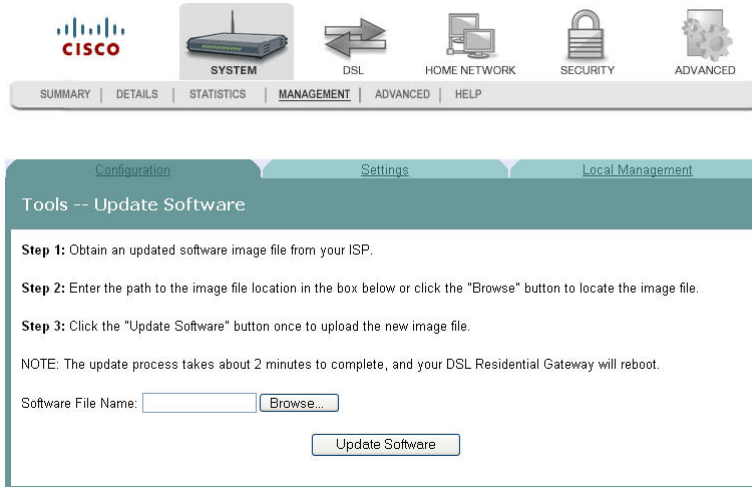
Reset Statistics

To reset the statistics, click **Reset** on the screen. This action clears the counters and sets them to zero for the packets received and transmitted on the ATM interface.

Tools Update Software

The Tools -- Update Software screen allows you to update the software for the residential gateway with a new version.

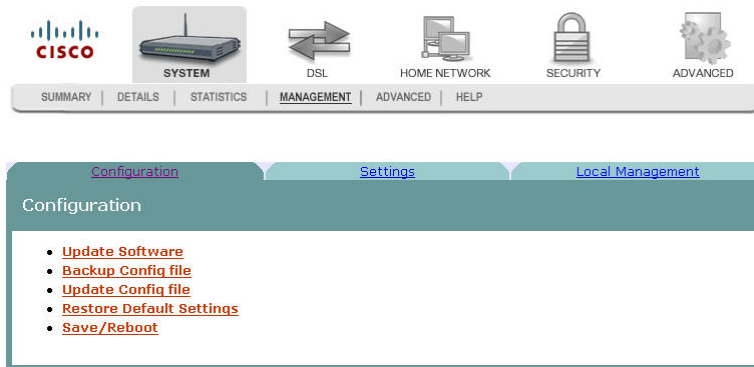
Path: System > Management > Configuration > Update Software



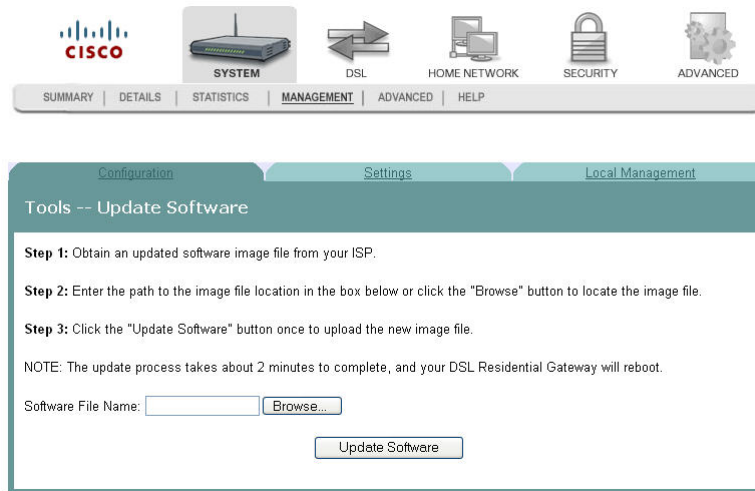
Updating Software

To update the software for the residential gateway, complete the following steps.

- 1 Click **System** on the main screen.
- 2 Click **Management**. The Configuration screen opens with the Configuration tab in the forefront.



- 3 Click **Update Software**. The Tools Update Software screen opens.

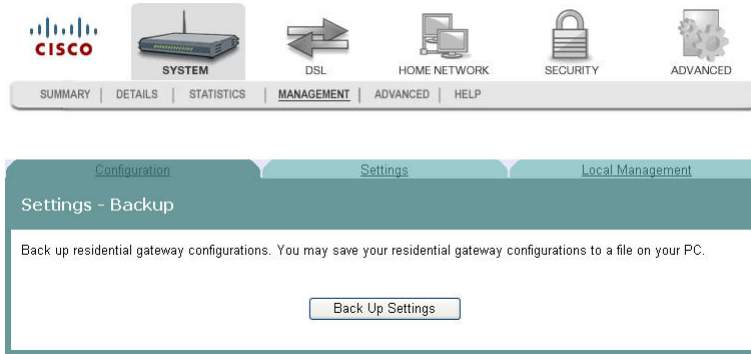


- 4 In the Software File Name field, click Browse to locate the software image file.
- 5 Click **Update Software** to update the software of your residential gateway with the new version. The residential gateway loads the new software and reboots when the software update is complete.

Settings Backup

The Settings - Backup screen allows you to back up the residential gateway configuration and save it to disk.

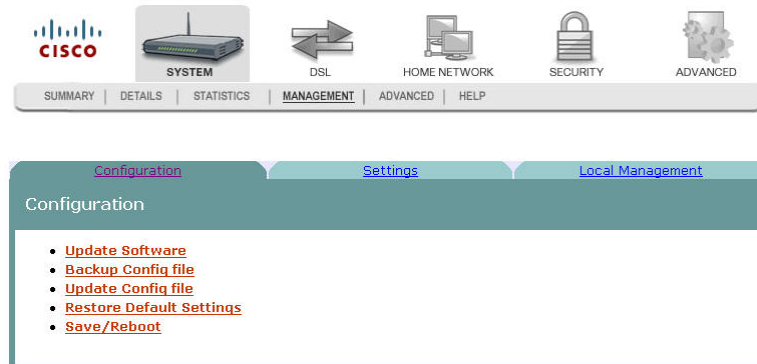
Path: System > Management > Configuration > Back Up Config File



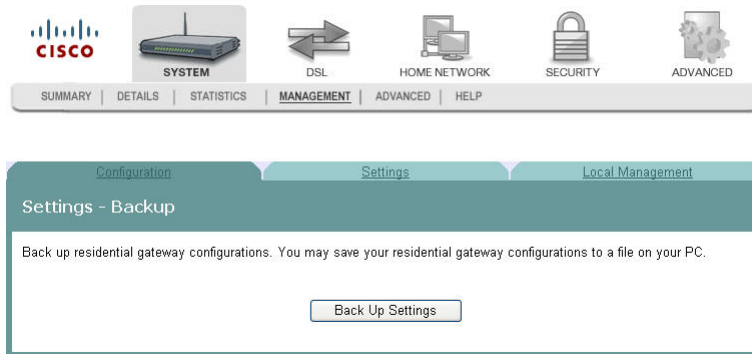
Backing Up Configuration Settings

To back up the configuration settings for the residential gateway, complete the following steps.

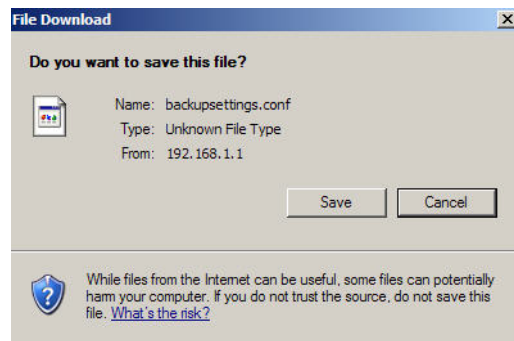
- 1 Click **System** on the main screen.
- 2 Click **Management**. The Configuration screen opens with the Configuration tab in the forefront.



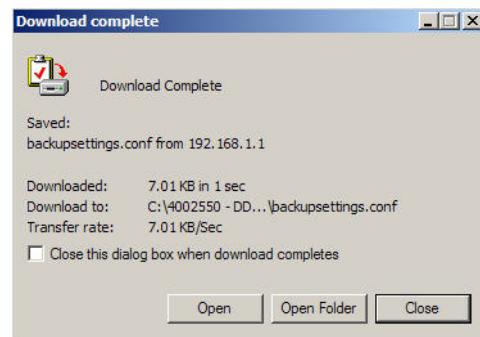
- 3 Click **Back Up Config file**. The Settings - Backup screen opens.



- 4 Click **Back Up Settings**. The following screen is displayed.



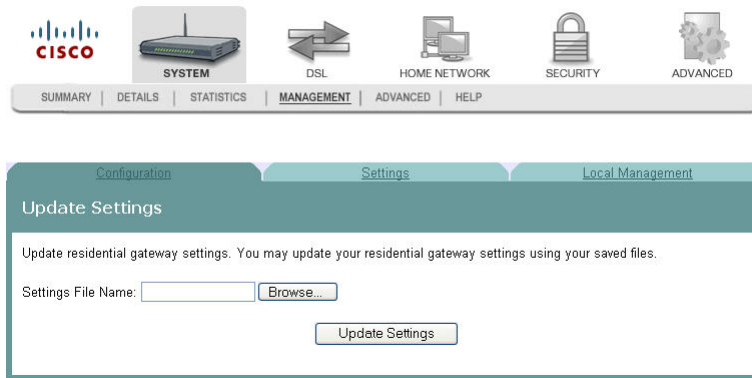
- 5 Click **Save**. The system prompts you to select a location to store the backup.
- 6 Select a location and type in a file name.
- 7 Click **Save** to save a backup of the configuration. The system displays a message when the download of the file is complete.



Update Settings

The Update Settings screen allows you to update the settings for the residential gateway from a source file. We recommend that you use this feature if you want to set up multiple residential gateways with a similar configuration.

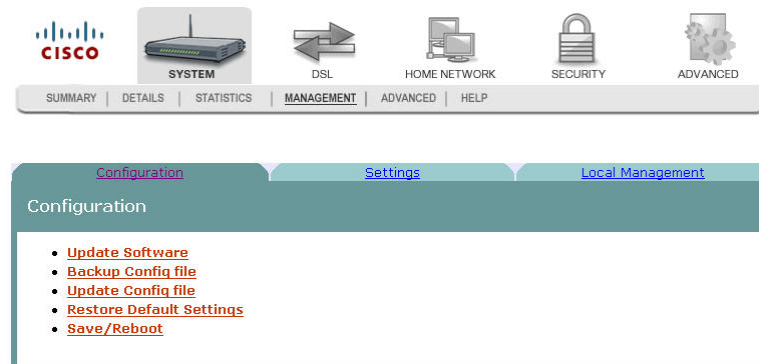
Path: System > Management > Configuration > Update Config File



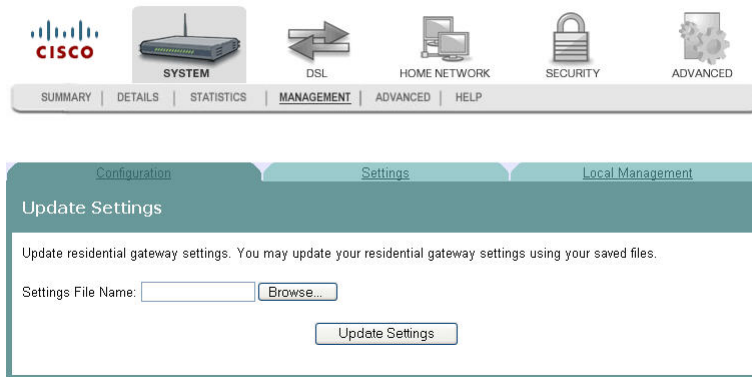
Updating Configuration Settings

To update the configuration settings for the residential gateway, complete the following steps.

- 1 Click **System** on the main screen.
- 2 Click **Management**. The Configuration screen opens with the Configuration tab in the forefront.



- 3 Click **Update Config file**. The Update Settings screen opens.



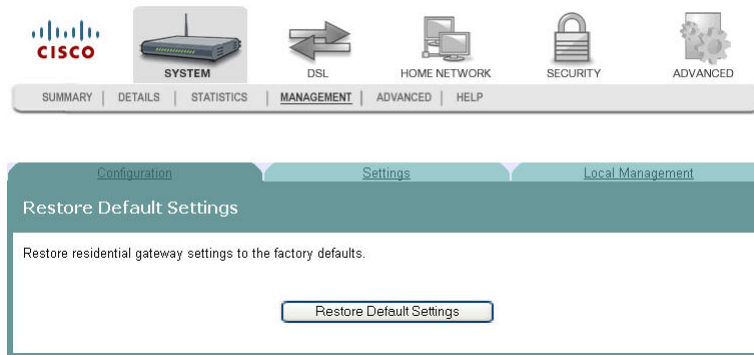
- 4 In the Settings File Name field, enter the name of the configuration file that you want to use to update your settings. You can click Browse to locate the file.
- 5 Click **Update Settings** to update the configuration of the residential gateway.
- 6 Wait a few minutes while the system reboots the residential gateway. The new configuration takes effect after the residential gateway reboots.

Restore Default Settings

The Restore Default Settings screen allows you to restore the residential gateway configuration to the default settings.

Note: You can also reset the device by inserting a sharp instrument, such as a paper clip, in the reset area on the back of the residential gateway.

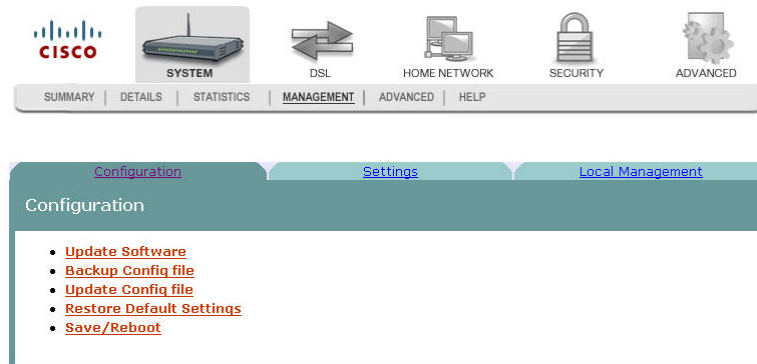
Path: System > Management > Configuration > Restore Default Settings



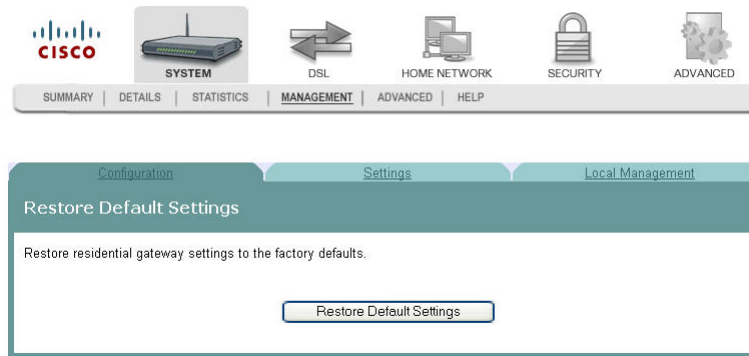
Restoring the Configuration to the Default Settings

To restore the configuration to the default settings, complete the following steps.

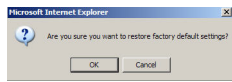
- 1 Click **System** on the main screen.
- 2 Click **Management**. The Configuration screen opens with the Configuration tab in the forefront.



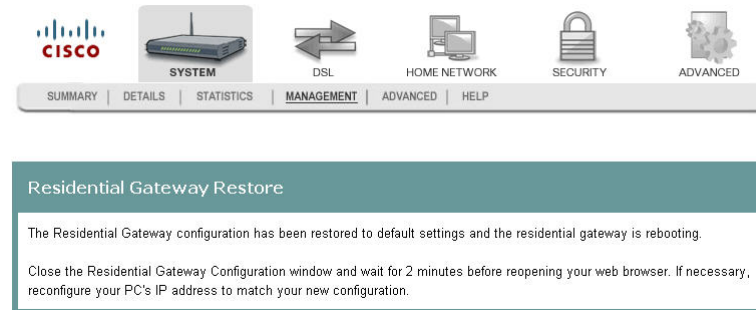
- 3 Click **Restore Default Settings**. The Tools Restore Default Settings screen opens.



- 4 Click **Restore Default Settings**. The system displays the following prompt:



- 5 Click **OK**. The system displays the following message:

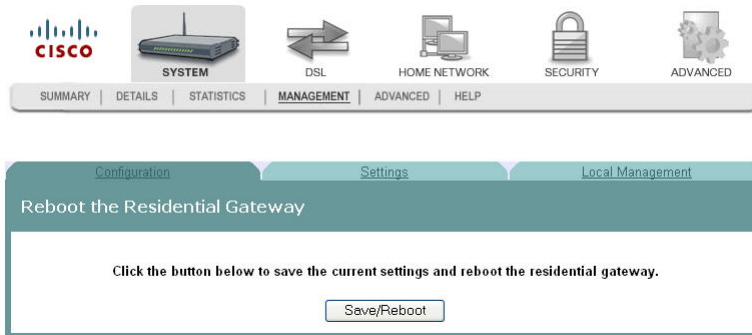


- 6 Follow the on-screen instructions to restore the default settings.

Saving the Configuration for the Residential Gateway

The Reboot the Residential Gateway screen allows you to save any configuration changes and to reboot the router to make the changes take effect.

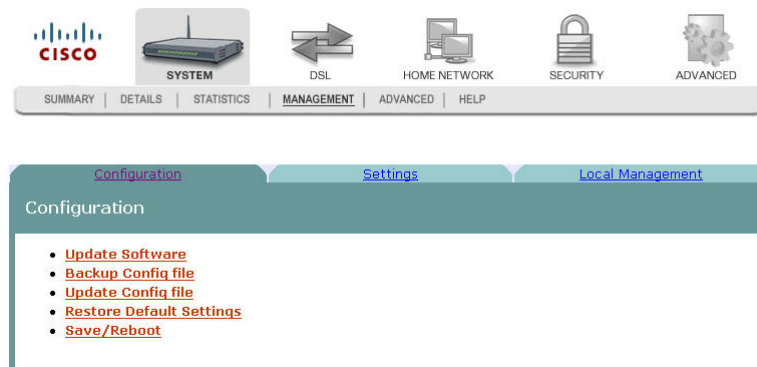
Path: System > Management > Configuration > Restore Default Settings > Save/Reboot



Saving the Configuration and Rebooting the Residential Gateway

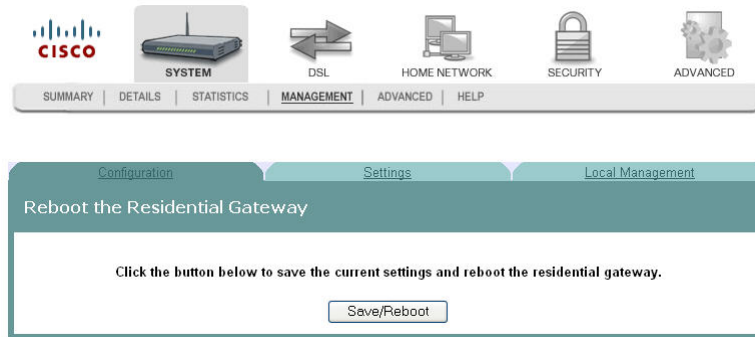
To save any configuration changes and to reboot the router to make the changes take effect, complete the following steps.

- 1 Click **System** on the main screen.
- 2 Click **Management**. The Configuration screen opens with the Configuration tab in the forefront.



Saving the Configuration for the Residential Gateway

- 3 Click **Save/Reboot**. The system displays the following message:

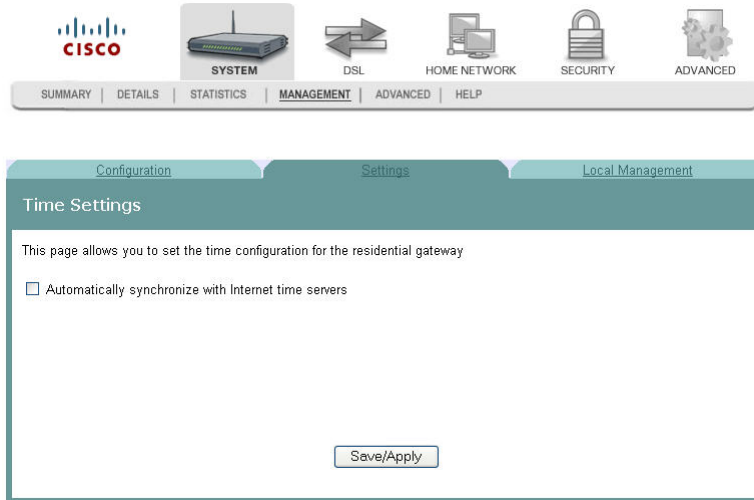


- 4 Follow the instructions on the the screen to save the configuration and to reboot the router. The System Summary screen opens when the residential gateway has finished rebooting. The new settings are displayed.

Time Settings

The Time Settings screen allows you to synchronize the time for the residential gateway with a network-based time server.

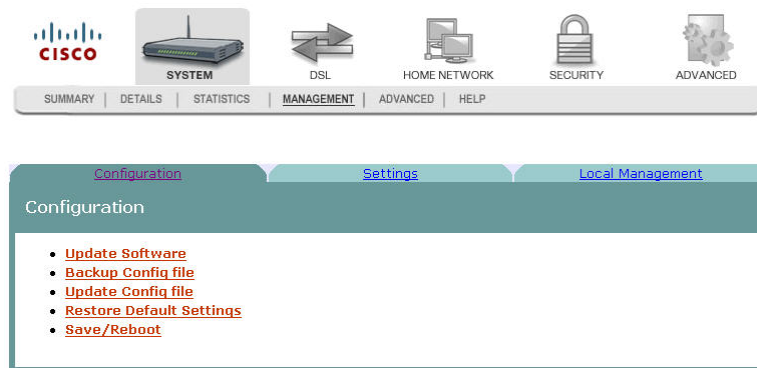
Path: System > Management > Settings > Internet Time



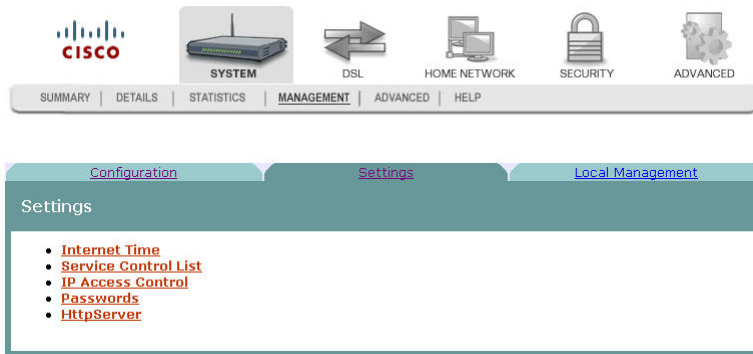
Synchronize with Internet Time

To synchronize the time for the residential gateway with the Internet time, complete the following steps.

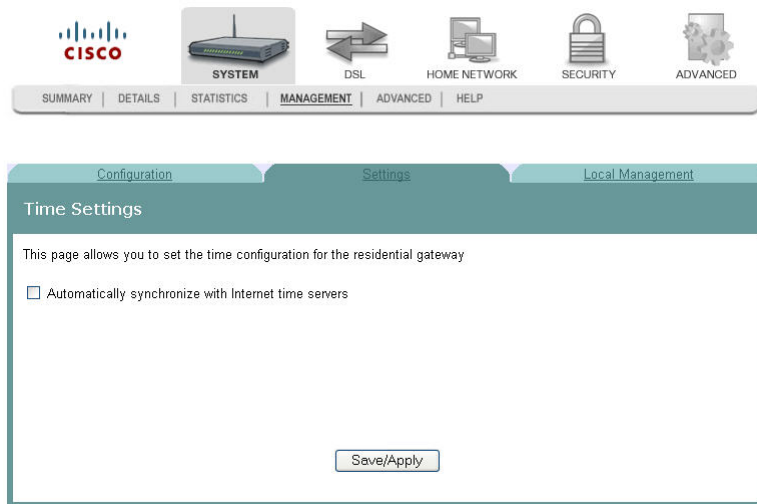
- 1 Click **System** on the main screen.
- 2 Click **Management**. The Configuration screen opens with the Configuration tab in the forefront.



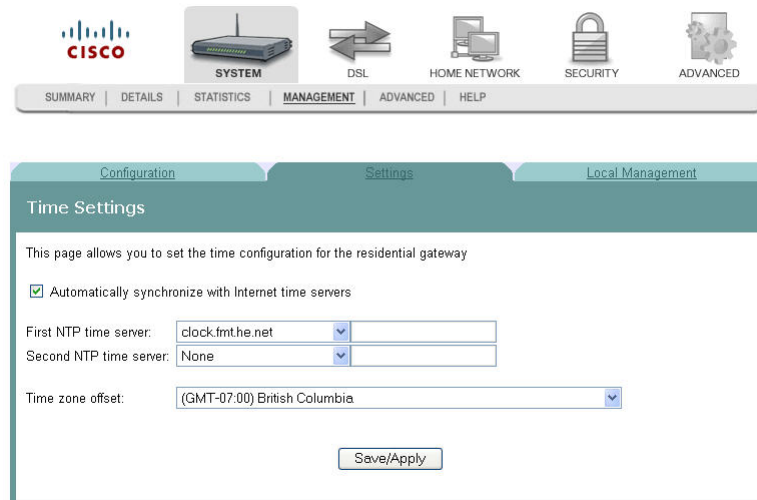
- Click the **Settings** tab. The Settings screen opens.



- Click **Internet Time**. The Time Settings screen opens.



- Check the box **Automatically synchronize with Internet time servers**. The Time Settings screen opens with populated fields.



- In the First NTP time server field, select a time server from the pull-down list. If you select Other, enter the name of the server in the blank field.

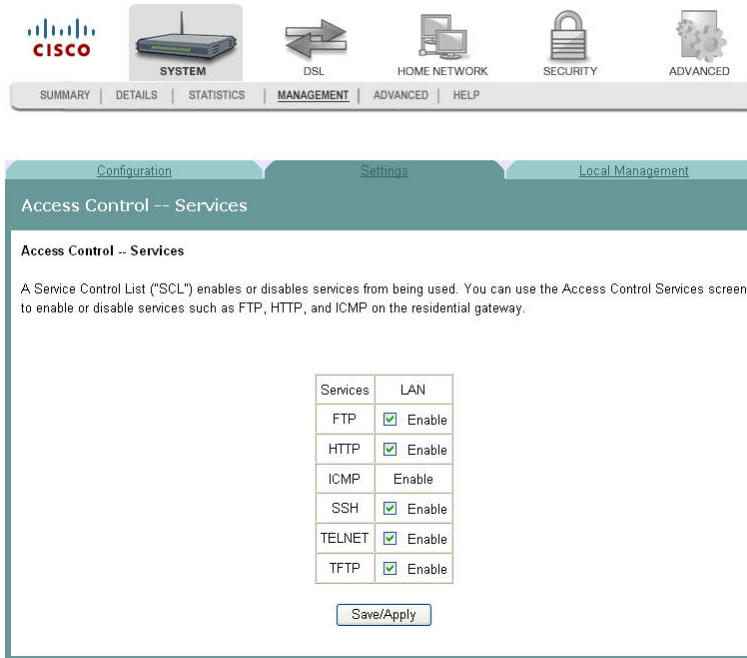
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- 7 In the Second NTP time server field, select a time server from the pull-down list. If you select Other, enter the name of the server in the blank field.
- 8 In the Time zone offset field, select the time zone specific to your area.
- 9 Click **Save/Apply**.

Access Control Services

The Access Control -- Services screen allows you to enable or disable services such as FTP, HTTP, and ICMP on the residential gateway.

Path: System > Management > Settings > Service Control List



The screenshot shows the Cisco residential gateway interface. The top navigation bar includes SYSTEM, DSL, HOME NETWORK, SECURITY, and ADVANCED. The main content area shows the Access Control -- Services screen. The screen title is "Access Control -- Services". Below the title, there is a description: "A Service Control List ("SCL") enables or disables services from being used. You can use the Access Control Services screen to enable or disable services such as FTP, HTTP, and ICMP on the residential gateway." Below the description is a table with two columns: Services and LAN. The table contains the following rows:

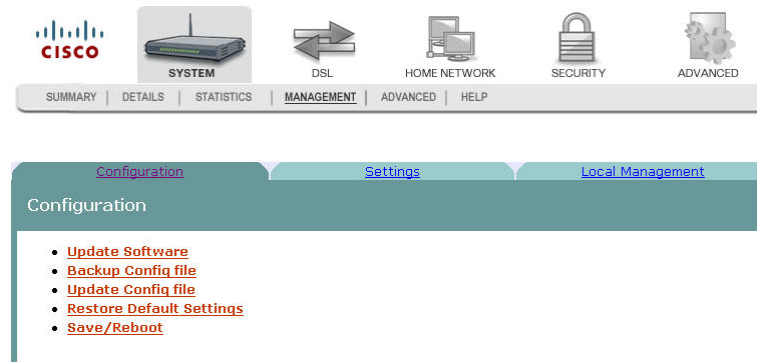
Services	LAN
FTP	<input checked="" type="checkbox"/> Enable
HTTP	<input checked="" type="checkbox"/> Enable
ICMP	Enable
SSH	<input checked="" type="checkbox"/> Enable
TELNET	<input checked="" type="checkbox"/> Enable
TFTP	<input checked="" type="checkbox"/> Enable

Below the table is a "Save/Apply" button.

Enabling or Disabling Services

To enable or disable services on the residential gateway, complete the following steps.

- 1 Click **System** on the main screen.
- 2 Click **Management**. The Configuration screen opens with the Configuration tab in the forefront.

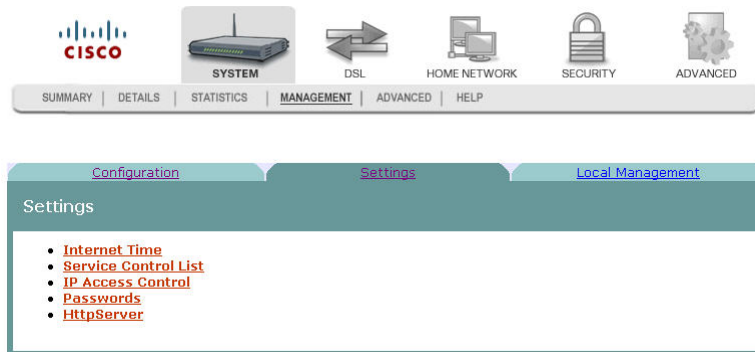


The screenshot shows the Cisco residential gateway interface. The top navigation bar includes SYSTEM, DSL, HOME NETWORK, SECURITY, and ADVANCED. The main content area shows the Configuration screen. The screen title is "Configuration". Below the title, there is a list of configuration options:

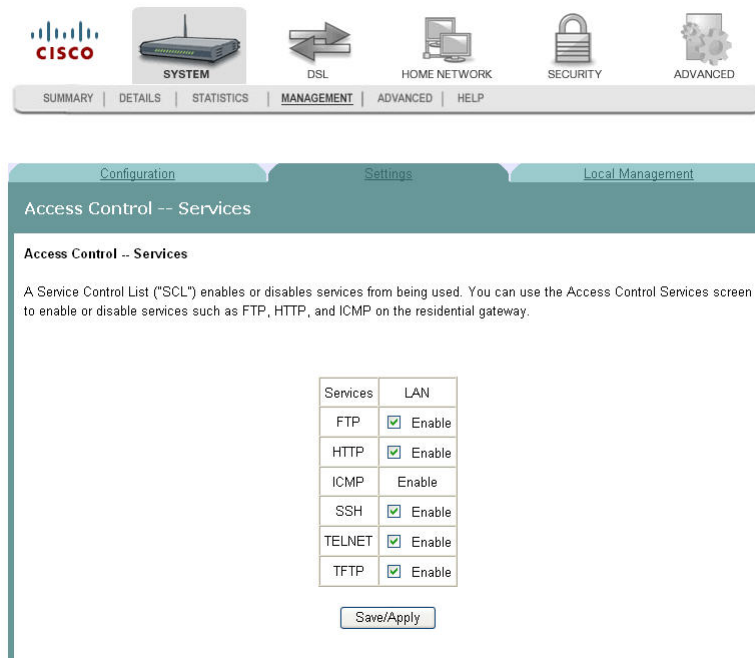
- [Update Software](#)
- [Backup Config file](#)
- [Update Config file](#)
- [Restore Default Settings](#)
- [Save/Reboot](#)

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- 3 Click the **Settings** tab. The Settings screen opens.



- 4 Click **Service Control List**. The Access Control -- Services screen opens.

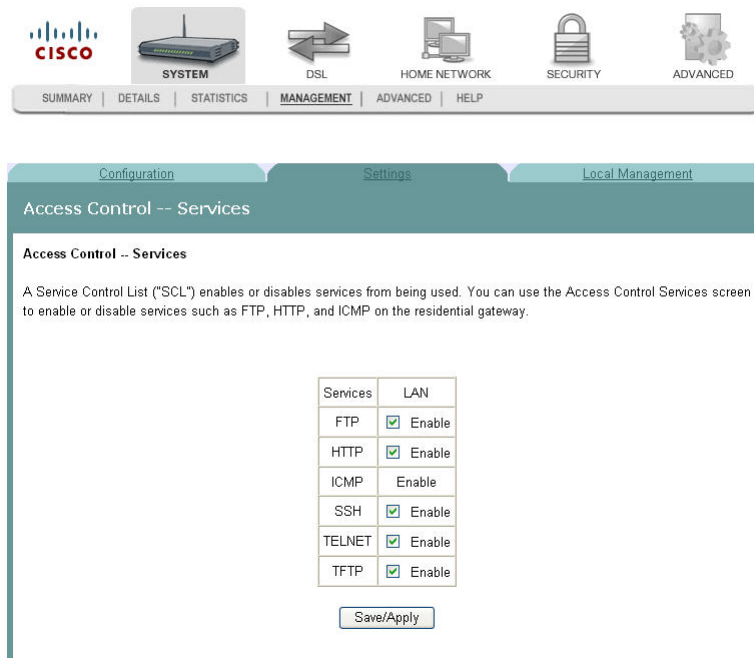


- 5 To enable or disable a service, do the following:
- To enable a service, select the check box next to the service you want to enable. A check box with a check indicates that the service is enabled.
 - To disable a service, de-select the check box next to the service you want to disable. A check box without a check indicates that the service is disabled.
- 6 Click **Save/Apply** to enable or disable the selected services.

IP Access Control

The IP Address Access Control mode, if enabled, permits access to local management services from IP addresses contained in the Access Control List. If the Access Control mode is disabled, you cannot configure the residential gateway from non-local IP addresses. For example, you can use this feature to prevent a remote site from configuring the residential gateway. The services are the system applications listed in the Service Control List.

Path: System > Management > Settings > IP Access Control



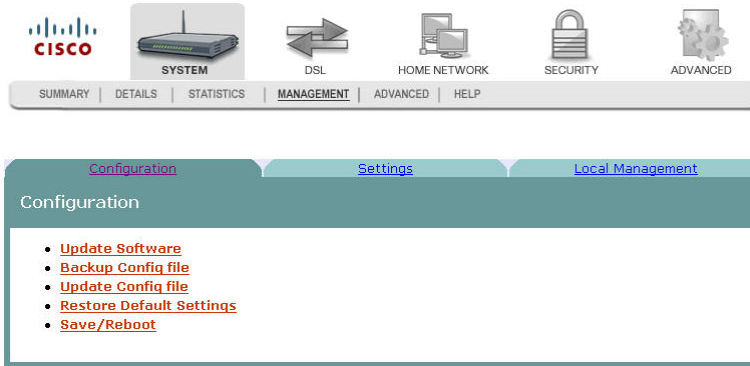
Adding IP Address Access Control

To add IP address access control, complete the following steps.

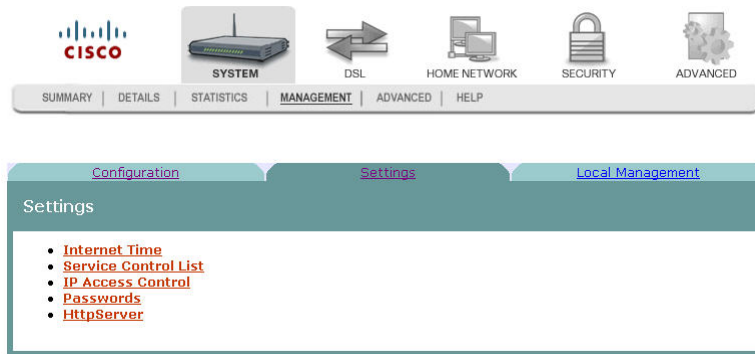
- 1 Click **System** on the main screen. The System Summary screen opens by default.

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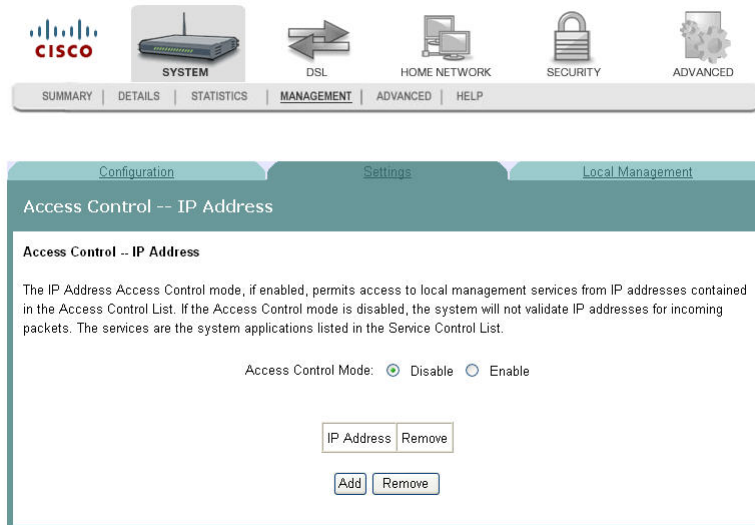
- Click **Management**. The Configuration screen opens with the Configuration tab in the forefront.



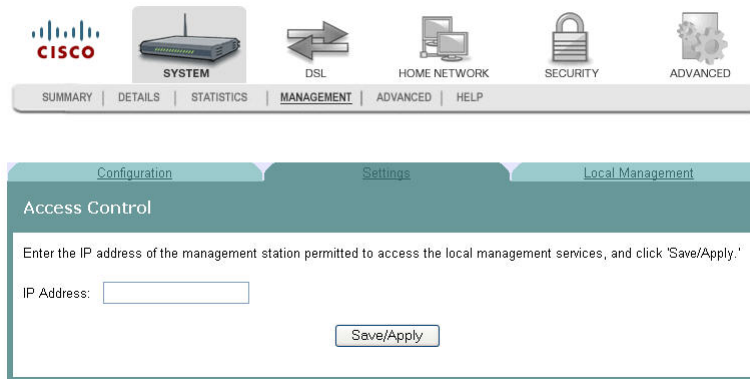
- Click the **Settings** tab. The Settings screen opens.



- Click **IP Access Control**. The Access Control -- IP Address screen opens.



- 5 Click **Add**. The Access Control screen opens.



- 6 In the **IP Address** field, enter the IP address of the management station that you want to allow access to the local management services.
- 7 Click **Save/Apply** to allow access for the IP address you entered.

Password Access to the Residential Gateway

Access to the residential gateway is controlled through three user accounts:

admin. Allows unrestricted access to change and view the configuration of the residential gateway. This login allows access to privileged information.

support. Allows an ISP technician to access your residential gateway for maintenance and to run diagnostics

user. Allows access to view configuration settings and statistics, as well as, to update the residential gateway's software.

The admin login provides access to all screens (including privileged information) for the residential gateway. The support login and user login provide access to only a subset of the screens provided to the admin login.

Path: System > Management > Settings > Passwords

The screenshot shows the Cisco residential gateway web interface. At the top, there is a navigation bar with icons for CISCO, SYSTEM, DSL, HOME NETWORK, SECURITY, and ADVANCED. Below this is a menu bar with links for SUMMARY, DETAILS, STATISTICS, MANAGEMENT (highlighted), ADVANCED, and HELP. The main content area is titled 'Access Control -- Passwords' and contains the following text:

Access to your residential gateway is controlled through three user accounts: admin, support, and user.

The user name "admin" has unrestricted access to change and view the configuration of your residential gateway.

The user name "support" is used to allow an ISP technician to access your residential gateway for maintenance and to run diagnostics.

The user name "user" can access the residential gateway, view configuration settings and statistics, as well as, update the Residential Gateway's software.

Use the fields below to enter up to 16 characters and click "Save/Apply" to change or create passwords.
Note: The password cannot contain a space.

Username:

Old Password:

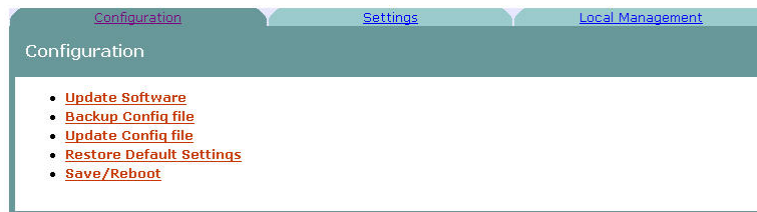
New Password:

Confirm Password:

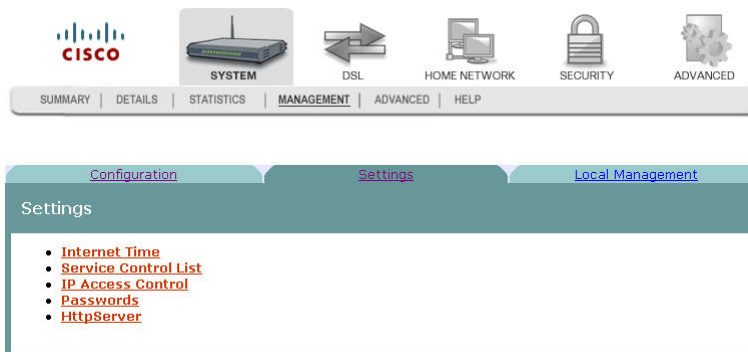
Creating Passwords

To create passwords for the residential gateway, complete the following steps.

- 1 Click **System** on the main screen.
- 2 Click **Management**. The Configuration screen opens with the Configuration tab in the forefront.



- 3 Click the **Settings** tab. The Settings screen opens.



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- 4 Click **Passwords**. The Access Control -- Passwords screen opens.

The screenshot shows the Cisco web interface for configuring passwords. At the top, there is a navigation bar with icons for SYSTEM, DSL, HOME NETWORK, SECURITY, and ADVANCED. Below this is a secondary navigation bar with links for SUMMARY, DETAILS, STATISTICS, MANAGEMENT (highlighted), ADVANCED, and HELP. The main content area has three tabs: Configuration, Settings, and Local Management. The 'Access Control -- Passwords' page explains that access is controlled through three user accounts: admin, support, and user. It provides details for each user and instructions for setting passwords. The form includes a Username drop-down menu, and three text input fields for Old Password, New Password, and Confirm Password. A Save/Apply button is at the bottom.

- 5 In the Username field from the drop-down list, select the type of password you are creating: admin, support, or user. Admin is the default user name.
- 6 In the Old Password field, enter the old password. The maximum character length is 16 characters, and passwords cannot contain a space. Admin is the default password.
- 7 In the New Password field, enter the new password. The maximum character length is 16 characters, and passwords cannot contain a space.
- 8 In the Confirm Password field, enter the new password again to confirm your entry.
- 9 Click **Save/Apply** to save the password.