



Cisco BTS 10200 Softswitch Release Notes for Release 6.0.1

Revised: July 19, 2009, OL-17290-09

Introduction

The Cisco BTS 10200 Softswitch is a class-independent software switch (softswitch) that provides next-generation integrated voice and data switching solutions for packet networks.

Release 6.0.1 continues the evolution of the BTS 10200, focusing on the cable market and alternative wireline and wireless service providers. This release adds features and functionality for next generation network VoIP networks and implements IMS Ready features.

This document describes new features and enhancements in Release 6.0.1 900.06.00V00.00. Maintenance (Vxx) releases might be issued after this release. Vxx releases include release notes only if they contain new information. For more BTS 10200 information, see guides available on cisco.com.



Warning

Sun Explorer is installed as part of Release 6.0 builds as a requirement from Sun for resolving hardware issues, but is left disabled. Sun Explorer should not be enabled to run using cron as this is a untested and unsupported configuration.

Sun Explorer is CPU intensive and could cause issues with the real-time processes running on active and standby BTS 10200 platforms. Sun Explorer should be run only when the BTS 10200 platform is OOS (for example, after a platform stop all is executed).

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Features and Enhancements

The following tables lists the features added or enhanced for Release 6.0.1:

Feature or Enhancement	Description
10/11 digit incoming Caller ID match	<p>This feature handles the 10-digit and 11-digit format differences between the Automatic Number Identification (ANI) and Screening List Editing (SLE) table. SLE services allow subscribers to screen and manage incoming calls with features like Selective Call Forwarding and Selective Call Rejection.</p> <p>Using SLE, subscribers can block all E-164 dial plans. Subscribers can specify lists of DN's for which the BTS 10200 should screen incoming calls and the action it should apply to the calls. This feature supports POTs and Centrex subscribers.</p>
100 PC 1.5 SOAP connections	This feature enables up to 100 PacketCable SOAP/XML client connections/sessions with the BTS 10200's EMS.
911 Call Display	<p>This feature allows you to view the count of all on-going emergency calls based on the call-type and trunk group. For example, query call-count returns all 911 calls currently active by displaying all active calls on trunk groups designated for 911.</p> <p>The call-type token is mandatory and can take values emergency, police, ambulance, fire, all-emergency, and all. The tgn-id and tg tokens are optional and if specified the call-count will be provided for the specified trunk group (TG) only.</p>
911 ANI	This feature allows the service provider to provision Enhanced 911 (E911) specific number for subscribers, which may be different from subscriber directory number (DN) or the billing DN.
911 Callback	<p>This feature allows Public Safety Answering Point (PSAP) lines to call back a subscriber provisioned on the BTS 10200. The BTS 10200 treats these callbacks as special high-priority calls so that when the subscriber is on an active PSAP call, all terminating features are disabled except Call Waiting (CW) and Call Forwarding Busy (CFB).</p> <p>ECB is an office-based feature. When the ECB subscriber receives a call, the BTS 10200 checks the calling DN against the list of DN's in the emergency number list to determine whether it is a PSAP line. If the DN is in the list, it is treated as ECB. ECB is provided to any subscriber associated with an office service that has ECB.</p>
Account Code collection timer enhancement	This feature reduces the time delay after subscribers enter account codes.
ASMB Backup Compression	This feature enables automatic compression of the shared memory compression backups, without customer action or intervention.

Feature or Enhancement	Description
Billing Enhancement	The billing record for World Zone 1 has the full E-164 number.
Billing file transmission time	<p>This feature enhances BTS 10200 accounting subsystem management. This feature changes the polling interval unit from minutes to seconds; reducing transmission time of billing files from 1 to 60 minutes to 30 to 3600 seconds.</p> <p>The polling-interval token specifies the time, in seconds, between FTP file transfers from the BTS 10200 EMS and the remote mediation system or accounting office. The default value is 900 seconds. The CDR file size takes precedence over the polling-interval parameter.</p>
Billing Report Enhancement	This feature allows you to search billing records using a call's terminating number and originating number.
CALEA for non-BTS 10200 subscribers	This feature adds the functionality in CALEA to tap non-BTS subscribers. Enable this feature using a verification flag, local_sub=N/Y, in the wiretap table.
Call Admission Control for SIP Trunking	<p>This feature allows you to configure and manage SIP soft trunks for incoming and outgoing calls. It allows you to monitor system performance by monitoring the total number of sessions admitted through a SIP trunk. You can configure a SIP trunk as:</p> <ul style="list-style-type: none"> • Inbound • Outbound • Common • Any combination of the above
Call Forward Not Reachable	<p>This feature forwards an incoming call when the subscriber (for whom the call is intended) is unreachable. The unreachable condition can occur if the gateway serving the subscriber line is down, or if any intermediate network element serving the subscriber line is down.</p> <p>The system treats the subscriber line as unreachable if any one of the following conditions is true:</p> <ul style="list-style-type: none"> • The Media Gateway Control Protocol (MGCP) or Network-based call signaling (NCS) termination or media gateway (MGW) is administratively or operationally out of service (OOS). • The BTS 10200 call-setup process has timed out after retransmitting create connection (CRCX) messages to the MGCP or NCS MGW without achieving a successful call setup. • A SIP subscriber Address Of Record (AOR) used in SIP is administratively or operationally out of service (OOS). <p>In previous releases, the unreachable feature was provisionable through a special trigger on the Call Forward Busy feature. CFNR allows the unreachable feature to be provisioned and assigned independently from the CFB feature.</p>

Feature or Enhancement	Description
Call Forwarding Enhancements	<p>This feature allows a subscriber to activate CF on a new destination number (DN) without first having to deactivate it on an old DN; the new DN overwrites the old on the BTS 10200. This aligns with European CF standards. After the subscriber activates the new DN, an announcement confirms the new DN and its CF status.</p> <p>This feature also allows a subscriber to check whether CF is active on a DN without having to manually enter that DN. When the subscriber checks, the system plays an announcement explaining which DNs have CF.</p>
Call Transfer for Business Groups	<p>This feature enables the BTS 10200 to support all the ways Call Transfer can be provided to subscribers in a business group:</p> <ul style="list-style-type: none"> Call Transfer Internal Only Call Transfer Outside Call Transfer Individual, Incoming Only

Feature or Enhancement	Description
Case sensitive changes	<p>Case sensitive changes to lowercase have been made to the following existing parameters as part of the upgrade and data migration to Release 6.0:</p> <ul style="list-style-type: none"> • Table Name: AGGR, <ul style="list-style-type: none"> – Parameter converted to lower case: TSAP_ADDR • Table Name: LOCAL_SIP_HOSTNAME <ul style="list-style-type: none"> – Parameters converted to lower case: VIA_HOSTNAME, CONTACT_HOSTNAME, FROM_HOSTNAME, and PAID_HOSTNAME • Table Name: MGW <ul style="list-style-type: none"> – Parameter converted to lower case: TSAP_ADDR and UNIQUE_TSAP_ADDR • Table Name: MGW_PROFILE <ul style="list-style-type: none"> – Parameter converted to lower case: TERMINATION_PREFIX • Table Name: MLHG_TERMINAL <ul style="list-style-type: none"> – Parameter converted to lower case: TERM_ID • Table Name: SCTP_ASSOC <ul style="list-style-type: none"> – Parameter converted to lower case: REMOTE_TSAP_ADDR1 and REMOTE_TSAP_ADDR2 • Table Name: SERVING_DOMAIN_NAME <ul style="list-style-type: none"> – Parameter converted to lower case: DOMAIN_NAME • Table Name: SIP_INBOUND_POLICY <ul style="list-style-type: none"> – Parameter converted to lower case: TOKEN_STRING • Table Name: SIP_ELEMENT <ul style="list-style-type: none"> – Pre-check if there is any case-insensitively duplicated TSAP_ADDR. Convert TSAP_ADDR to lowercase. • Table Name: SIP_SG_ELEMENT <ul style="list-style-type: none"> – Parameter converted to lower case: ID, TSAP_ADDR, and SIP_SERVER_GROUP_ID. • Table Name: SIP_SG_FAILURE_POLICY <ul style="list-style-type: none"> – Parameter converted to lower case: SIP_SERVER_GROUP_ID • Table Name: SIPT_ISUP_VER_ALIAS <ul style="list-style-type: none"> – Parameter converted to lower case: ALIAS • Table Name: STATIC_CONTACT <ul style="list-style-type: none"> – Parameter converted to lower case: AOR_ID • Table Name: SUBSCRIBER <ul style="list-style-type: none"> – Parameter converted to lower case: TERM_ID and AOR_ID

Feature or Enhancement	Description
	<ul style="list-style-type: none"> • Table Name: TERMINATION <ul style="list-style-type: none"> – Pre-check if there is any case-insensitive duplicate ID. Convert ID to lowercase. • Table Name: TRUNK <ul style="list-style-type: none"> – Parameter converted to lower case: TERM_ID • Table Name: TRUNK_GRP <ul style="list-style-type: none"> – Parameter converted to lower case: SOFTSW_TSAP_ADDR and SIP_SERVER_GROUP_ID • Table Name: USER_AUTH <ul style="list-style-type: none"> – Parameter converted to lower case: AOR_ID
Cause code mapping	<p>This feature allows you to provision overrides to standard cause code mapping for the following:</p> <ul style="list-style-type: none"> • SIP to SS7 • SS7 to SIP
CDB header and trailer record modifications	<p>This feature increases usability of CDB records by:</p> <ul style="list-style-type: none"> • renumbering header and trailer record fields to prevent the trailer record value from being misinterpreted as a call type • eliminating blank lines
CORBA auto-install	<p>CORBA is automatically installed at the time of BTS 10200 installation or upgrade, no separate install is needed.</p>
ECAN control and DSP effect	<p>This feature allows you to configure the call-subtype-profile for test calls.</p>
EMS Admissions Control Policy	<p>This feature determines whether or not a BTS 10200 EMS user is allowed to access the operations, administration, maintenance, and provisioning (OAM&P) functions of the BTS 10200. All EMS users are subject to these restrictions except the following:</p> <ul style="list-style-type: none"> • maintenance (MAINT) category users • CALEA users • ciscousers • optiusers <p>Note This feature is supported for CORBA, native SOAP/XML, and PacketCable SOAP/XML interfaces only.</p>

Feature or Enhancement	Description
EMS sizing tool	<p>This feature is a tool delivered as a web page on your EMS; it allows you to forecast sizing and capacity of your BTS 10200. The EMS sizing tool calculates BTS 10200 boundaries for the following:</p> <ul style="list-style-type: none"> • database sizing • feature combinations table sizes • hardware limitations • call mixes <p>Using this tool, you can classify performance indicators like feature triggers per call, calls per second and active calls per subscriber.</p> <p>Note This tool is not a true network forecasting modeler for Cisco networking products nor is it a tool to forecast network gateway throughput.</p>
Enhance Command-Scheduler granularity	<p>This feature allows you to use start-time and recurring command tokens to schedule command time and frequency (hourly, daily, weekly, monthly, etc.).</p>
External subscriber database migration (northbound provisioning)	<p>This feature allows an operator to provision TAS subscriber profiles on the BTS 10200. The BTS 10200 stores the TAS subscriber profiles in its own databases on the EMS and CA or FS:</p> <ul style="list-style-type: none"> • Emergency ANI • HSS Public ID • Screen List Editing (SLE) • Single Number Reach (SNR) • SIP Trigger Profile • Speed Call: 1-Digit (SC1D) • Speed Call: 2-Digit (SC2D) • Subscriber • Subscriber Feature Data • Subscriber Service Profile • Subscriber Time-Of-Day Schedule <p>The BTS 10200 pushes updated subscriber information to the HSS when either of the following occurs:</p> <ul style="list-style-type: none"> • An operator enters commands to retrieve, add, change, or delete subscriber profiles. • A TAS subscriber uses a handset to control calling features.
FIM/XML Editing Tool	<p>This feature defines interactions between the IMS Service Control Interface (ISC) and Feature Control Protocol (FCP) features. An efficient configurable FIM/XML file has rules. The BTS 10200 Feature Server manages the ISC and FCP feature interactions based on the rules in this FIM/XML file.</p>
GigE Support	<p>This feature increases bandwidth between network switches and the BTS 10200 from 100 Mbps to 1000 Mbps.</p>

Feature or Enhancement	Description
Heap Monitoring	This feature automatically monitors heap memory usage once an hour.
Hostage Situation for LEA	<p>This feature allows a BTS 10200 subscriber taken hostage to make immediate contact with a Law Enforcement Authority (LEA).</p> <p>The feature restricts incoming calls to and outgoing calls from the subscriber hostage. Regardless of the directory number (DN) the hostage subscriber dials, the outgoing call terminates at HOSTAGE_OUTBOUND_DN, which connects the hostage subscriber directly to the LEA.</p>
Incremental Shared-Memory Restoration (ISMR)	<p>This feature is part of a larger solution that allows comprehensive recovery from disastrous system incidents like an abrupt power-cut. ISMR recovers the BTS 10200 shared-memory (SHM) on a platform by bringing it back to its state immediately prior to system disaster.</p> <p>Used with ASMB (automatic shared memory backup), ISMR restores data changes since the last ASMB backup.</p>
Long Duration Call Cutoff	<p>This feature allows the service provider to disconnect the calls that run for a long period of time using a configurable timer.</p> <p>A related feature adds forwarding number information to both first and continuation CDRs created for long-duration calls.</p>
MGW Keep alive	<p>This feature enhances existing functionality as follows:</p> <ul style="list-style-type: none"> • If you set term-seize-unreach to Y, the BTS 10200 attempts to set up calls to the MGW even if it has declared the MGW unreachable. • New commands query unreachable MGWs, trunk termination endpoints, subscriber termination endpoints. • The system provides a tabular display of the status for MGWs, trunk termination endpoints, subscriber termination endpoints. • The system generates and clears new alarms when the MGWs, trunk termination endpoints, subscriber termination endpoints become unreachable.
MLHG Nonhunt	This feature enables you to provision a subscriber (belonging to an MLHG group) as a nonhunt subscriber. Subsequently, when a nonhunt subscriber is called directly, and the subscriber is busy, the BTS 10200 does not perform MLHG hunting to other terminals in the MLHG.
Native Data Export	This feature enables a user to export all provisioning data from the BTS 10200 using a CLI command. The BTS 10200 stores this data in a user-named output file in text format before exporting it.

Feature or Enhancement	Description
Operator calls Call Type = 27	<p>This feature uses a parameter in the ca-config table, CALLTYPE-OPER-CALL-CDR. If set to N (default), the BTS 10200 populates billing Field 1 in the same manner as Release 5.0. If set to Y, the BTS 10200 treats the call as follows:</p> <ul style="list-style-type: none"> • User dials 0 — The billing call type is shown as 26, OPERATOR (same as Release 5.0). • User dials 0+ — The billing call type is shown as 28, OPERATOR-ASSISTED. • User dials 00 — The billing call type is shown as 27, CARRIER-OPERATOR (same as Release 5.0). • User dials 01+ — The billing call type is shown as 44, INTL-OPERATOR.
Overlap Dialing	<p>This feature reduces the time the BTS 10200 takes to process dialed digits associated with a non-NANP dial plan. Overlap dialing enables the BTS 10200 to begin processing a call as soon as it can determine a destination from dialed digits that form only part of a complete number.</p>
P-Charging-Vector Header	<p>This feature correlates CDRs from different elements in the IMS network. Acting as a TAS, the BTS uses a globally-unique charging identifier for IMS billing called the P-Charging-Vector header.</p>
Privacy CDR	<p>This feature makes any service ID greater than 200 part of Privacy Plus feature. The BTS 10200 provides a base value of 200 for all Application-Server specific Service Types.</p> <p>When the SIP Trigger feature is invoked, and the BYE Message received from Application-Server has a reason-header with a code (any 2 digit or 3 digit code), BTS 10200 adds a value of 200 to the reason code (that is, BYE message Q850.causecode + 200).</p>
Provisioning performance improvement	<p>This feature provides support for additional EMS spindles to improve provisioning performance.</p>
Midcall SCA activation for Centrex subscriber	<p>This feature addresses the blocking of Subscriber Controlled Services like the following during midcall (MDC):</p> <ul style="list-style-type: none"> • Selective Call Acceptance—SCA • Selective Call Forwarding—SCF • Selective Call Rejection—SCR • Distinctive Ringing/Call Waiting—DRCW <p>MDC activates when a subscriber presses the Flash button or hookswitch during a call.</p> <p>During MDC, if a Centrex subscriber activates Subscriber Controlled Services, activation fails, and the features disable. If the subscriber tries to activate services with Call Hold (CHD), the activation fails.</p>

Feature or Enhancement	Description
<p>Semicolon token in CLI, FTP, SOAP, CORBA and PCSP</p>	<p>This feature allows operators to enter semicolons as part of token values, in accordance with RFC-3261.</p> <p>Use an escape character, “\”, before the semicolon in CLI and FTP to differentiate the semicolon as a token value, not a delimiter. For example:</p> <pre>add SCSCF-ROUTE-NAME url=sip:aaa@cisco.com:3006\;tag=AAA\;mode=XYZ;l r url is sip:aaa@cisco.com:3006;tag=AAA;mode=XYZ;l r</pre> <p>If “\” is a token value, enter it as “\\” so only the first backslash is treated as an escape character.</p> <p>The CLI and FTP return errors if a character other than “;” or “\” follows “\”.</p> <p>The escape character “\” does not apply to SOAP, CORBA, and PCSP adapters when entering CLI parameters into XML format.</p>
<p>Sh Interface</p>	<p>This feature allows the HSS and BTS 10200 communicate using the Sh interface over the Diameter protocol. The HSS and BTS 10200 communicate about subscriber data as follows:</p> <ul style="list-style-type: none"> • BTS 10200 queries subscriber profiles stored on the HSS. • BTS 10200 updates subscriber profiles stored on the HSS. • HSS notifies BTS 10200 when subscriber profiles change on the HSS. <p>BTS 10200 Diameter support was developed according to RFC 3589.</p> <p>BTS 10200 supports Sh 6.8.0.</p>
<p>Shared Memory Synchronization to Disk</p>	<p>This feature adds a periodic synchronization of the shared memory to the disk. If a power cycle happens, the loss of data is limited to the changes since the last sync.</p>
<p>SIM MRMW queue</p>	<p>This feature reduces dynamic memory usage. FCP (Feature Control Protocol) messages between SIM (Service Interaction Manager) and the Feature Server were queued in the MRMW queue (input message queue for SIM process), this led to excessive memory usage.</p> <p>With this optimization, FCP messages are queued in the system UDP (User Datagram Protocol) queue, avoiding memory exhaustion.</p>
<p>Single Number Reach</p>	<p>This feature enables service providers to assign a subscriber’s directory number (DN) to multiple devices. Assign this DN as either of the following:</p> <ul style="list-style-type: none"> • a virtual number shadowing existing DNs • the physical devices <p>Service providers unify the subscriber’s features using the same DN even when the subscriber’s devices belong to other service providers.</p> <p>This feature supports both sequential and simultaneous ringing on up to 6 devices.</p>

Feature or Enhancement	Description
SIP Business and Commercial Services	<p>These features are for SIP endpoints and available to Centrex subscribers. This includes subscribers that are members of both a Centrex group and an MLHG.</p> <ul style="list-style-type: none"> • Account and Authorization Codes • Speed Call <ul style="list-style-type: none"> – speed call 1-digit (SC1D) – speed call 2-digit (SC2D) – group speed call 1-digit (GSC1D) – group speed call 2-digit (GSC2D) • Multiline hunt group (MLHG) • Call Park (CPRK) • Call Retrieve (CPRK-RET) • Directed Call Pickup Without Barge-in (DPN) • Directed Call Pickup with Barge-in (DPU)
SIP Privacy Header	<p>This feature allows SIP subscribers to prevent their calling name and calling number from being sent to called parties.</p>
SIP Traffic Measurements	<p>This feature updates Traffic Measurement (TMM) counters at run-time for SIP traffic. It also captures SIP response (3xx, 4xx, 5xx, 6xx) counters per trunk group.</p> <p>This feature includes counters for the following call categories in CallP:</p> <ul style="list-style-type: none"> • Call Abandon • User Busy • No Answer <p>SIP counters for ingress and egress of 3xx, 4xx, 5xx and 6xx SIP responses are pegged when the above category messages are processed. BTS does not increment these counters on retransmissions (both reception and transmission).</p> <p>These counters are for an entire switch or on a per trunk group basis and are a part of the existing trunk group usage summary report.</p>
SIP Triggers enhancements	<p>This feature allows SIP subscribers to use originating SIP triggers.</p>
SIP xGCP SDP Interworking	<p>SIP and xGCP use SDP differently. SIP and xGCP exchange SDP transparently using the Call Agent (Cable Management System, Media Gateway Controller). However, the exchange of SDP data creates interworking problems because xGCP might ignore or reject SIP SDP syntax. Using this feature, the BTS 10200 translates SIP SDP syntax into equivalent xGCP connection-handling syntax.</p>
SNMP Trap Enhancements	<p>This feature converts BTS log files so they can be reported using an SNMP trap interface.</p>

Feature or Enhancement	Description
SOAP Manageability	<p>Note SOAP here refers to BTS native SOAP/XML, not PacketCable SOAP/XML.</p> <p>This feature enhances the manageability of user sessions. It impacts four areas:</p> <ol style="list-style-type: none"> 1. SOAP Software Developer's Kit (SDK) 2. SOAP Interface Servant (SOAP) 3. Session and System Manager (SMG for EMS) 4. User Security Manager (USM for EMS) <p>The SDK changes better demonstrate the use of API changes and reflect the effects as seen on the client side of a deployment. Session information is processed as part of the existing Session Manager capabilities. SOAP session policy is a timer-controlled process to remove the policy violated sessions.</p>
TAS support for SIP/IMS Voice Applications, external S-CSCF, ISC Interface between TAS and S-CSCF	<p>This feature allows the BTS to act as a TAS, providing voice services to SIP/IMS subscribers. The BTS 10200 communicates with serving call session control function (S-CSCF) servers over an IP multimedia service control (ISC) interface.</p>
Terminating black/white list	<p>This feature is a new functionality for Temporary Disconnect (TDISC) subscribers. This feature is used to allow or block certain incoming calls made to a subscriber whose status is temporarily disconnected (for example, for nonpayment of bills).</p> <p>The service provider provisions the accepted or blocked dialing numbers in the Terminating White and Black List, and assigns the list to the COS-RESTRICT-ID of the subscriber. This feature also enables the service provider to contact the TDISC subscriber, without having to change the status of the subscriber to active</p>
Translation table names	<p>This feature allows BTS 10200 users to name the following tables with names up to 32 characters:</p> <ul style="list-style-type: none"> • subscriber-profile • subscriber • dial_plan_profile • dial_plan • pop • service_provider • subscriber_profile • trunk_grp

Feature or Enhancement	Description
Turkish ISUP	This feature supports for the Turkish ISUP variant. The Turkish ISUP feature is based on the ITU-T Q.767 specification and the Turkish-ISUP implementation in the PGW 2200 softswitch. This feature delivers the Cisco BTS 10200 Softswitch to the Turkish markets requiring SS7 network interconnect through the Turkish ISUP protocol variant.
Use of * and # keys to mark the end of digits during IVR digit collection of forward-to-numbers	<p>Starting Release 6.0, the restart-key (*) and the return-key (#) are no longer supported during IVR digit collection of forward-to numbers (for RACF and SCF feature). This means that the BTS 10200 subscriber is not required to enter the # key to mark the end of digits for the forward-to numbers.</p> <p>The service provider should remove or disable any IVR prompt (voice recordings) that instructs the subscriber to press the # key to complete an entry. Alternatively, if the prompt is still played, the IVR server waits for inter-digit-timer to expire, before it sends the collected digits to BTS 10200.</p>

Hardware Requirements

This section has the following topics:

- [Host Hardware, page 13](#)
- [Ancillary Hardware, page 15](#)

Host Hardware

Minimum required memory for CAs is 8 GB; 16 GB is required for larger systems.



Caution

To ensure memory is available for necessary switch functions and avoid negatively impacting performance do not run non-BTS applications on CAs.

8 GB Sample Configurations

The following sample BTS 10200 configuration uses 8GB of physical memory. It is for illustrative purposes only.

- mediumNCS
 - 150,000 NCS subscribers
 - 10,000 for trunk groups

16 GB Sample Configurations

The following sample BTS 10200 configurations use 16 GB of physical memory. These examples are for illustrative purposes only.

- medium

- 150,000 total subscribers, any combination of SIP and NCS
- 15,000 for H.323
- 10,000 for trunk groups
- mgc
 - 50,000 total MGC subscribers
 - 10,000 for trunk groups
- tas
 - 200,000 total subscribers, 20,000 can be SIP or NCS, up to 200,000 for TAS
 - 10,000 for trunk groups
- commercial
 - 200,000 total subscribers, any combination of NCS, MGC, and 60,000 Centrex groups
 - 2,000 for SIP
 - 200 for H.323
 - 10,000 for trunk groups

For more information on configurations, go to <http://www.cisco.com/iam/BTSCLI/BTS.html> and select “Table Sizing Configuration” from the drop-list.

The following table lists requirements for host hardware:

Platforms	Processors	Memory (in GB)	Disk Size (in GB)
Sun Fire V1280	4 x 1280	8	4 x 73
Supported in existing installs. Not available for new installs.			
Sun Fire V1280	8 x 1200	16	2 x 73
Supported in existing installs. Not available for new installs.			
Sun Fire V1280	12 x 1200	24	4 x 73
Supported in existing installs. Not available for new installs.			
Sun Fire V240	2 x 1280	8	2 x 73
Supported in existing installs. Not available for new installs.			
Sun Fire V245	2 x 1500	16	4 x 73
Sun Fire V440	4 x 1280	8	4 x 73
Supported in existing installs. Not available for new installs.			
Sun Fire V445	4 x 1593	16	2 x 73
Sun Netra 1280	4 x 1200	8	2 x 73
Supported in existing installs. Not available for new installs.			

Platforms	Processors	Memory (in GB)	Disk Size (in GB)
Sun Netra 1280	8 x 1200	16	2 x 73
Supported in existing installs. Not available for new installs.			
Sun Netra 1280	12 x 1200	24	2 x 73
Supported in existing installs. Not available for new installs.			
Sun Netra 1290	8 x 1500	32	2 x 146
Sun SPARC Enterprise T2000	4 core	8	2 x 146
Sun SPARC Enterprise T5120	4 core	16	2 x 146
Sun SPARC Enterprise T5220	4 core	16	2 x 146

Ancillary Hardware

The following table lists ancillary hardware required if you are using reference sale host hardware.

System	Description
DC	Cisco Catalyst 2970 x1 DC 10/100 Autosensing Fast Ethernet Switch
AC and DC	Terminal server that permits console login

Software Requirements

The following table lists BTS 10200 software release types:

Release	Purpose	Version Numbering	Source and Defect Fixes
Major	Offers: <ul style="list-style-type: none"> Significant new features Enhancements Architectural changes Defect fixes 	Increments with each new version. Numbers cannot be skipped.	Based on a previous main release Receives defect fixes synced from previous Main releases throughout its life
Point	Offers: <ul style="list-style-type: none"> New features of limited scope Enhancements Defect fixes 	Increments as content is added. Numbers can be skipped.	Based on a previous major or point release Receives defect fixes synced from previous major or point releases throughout its life
Maintenance	Offers defect fixes for specific problems.	Increments as content is added. Numbers can be skipped.	—

Release Names

BTS 10200 product release version numbering is defined as either:

- Cisco BTS 10200 uu.ww.xx.yzz Pxx (for example, in Release Notes)

or

- 900-uu.ww.xx.yzz Pxx (CD part number)

where

- uu is the major release ID (0–99)—for example, 900-03.ww.xx.yzz
- ww is a point release (within a major) (0–99)—for example, 900-03.05.xx.yzz
- xx is the maintenance package number (within a point) (0–99)—for example, 900-03.05.03.yzz
- y is the software state, such that—for example, 900-03.05.03V00
 - D = Development load
 - I = Integration load
 - Q = System test load
 - F = Field verification ready
 - V = Verified (specified for externally available)
- When Pxx is at the end of the release numbering, a patch has been applied. P is the patch, and xx is the patch numbering.

Examples are:

- 900-04.05.00.V01
- 900-04.05.01.V00
- 900-05.00.00.V00
- 900-06.00.00.V00

Component Interoperability

The following table lists the certified platforms, functions, and protocols successfully tested with BTS 10200 release 6.0.1. Earlier or later releases of platform software might be interoperable, and it might be possible to use other functions on these platforms.

Platform(s) Tested	Function(s) Tested	Protocol(s) Tested	Load(s) Tested
Arris TM402P	MTA	NCS 1.0 IPSEC	5.0.50B
Arris TM502G	MTA	NCS 1.0 IPSEC	5.0.50B
Arris TM508A/512A	MTA	NCS 1.0 IPSEC	SIP:TS5.2.32 NCS: 5.2.22
BlueSlice	SH messaging TAS Call Processing	Diameter	HSS 3000 4.0

Platform(s) Tested	Function(s) Tested	Protocol(s) Tested	Load(s) Tested
Camiant MultiMedia Service Controller	Policy Server	—	2.3
Cisco 243x	IAD	MGCP 1.0	12.4(11)T4
Cisco 2651	SS7 Signaling Gateway	SIGTRAN M3UA/SUA	12.2(25)SW9
Cisco 5850	Trunking Gateway	—	12.3(11)T9
Cisco AS5300/5350/5400	Trunking Gateway	MGCP 1.0 TGCP	12.4.12c
Cisco BACC	Provisioning Server	—	2.6.2.7
Cisco Cat 3550	Ethernet Switch	—	121-22.EA10
Cisco DPE	Provisioning Server	—	2.6.1.7
Cisco ITP 7301	Signaling Gateway	SIGTRAN M3UA/SUA	12.2(25)SW9
Cisco ITP 7507	Signaling Gateway	—	12.2(25)SW9
Cisco ITP 7600	Signaling Gateway	—	—
Cisco MSFC1	IP Core - Cat 6500	—	6.4-20
Cisco MSFC1	IP Core - Cat 6500	—	121-26.E4
Cisco Network Registrar	IP address management	—	6.1.2.3
Cisco PXM45/AXSM	Trunking Gateway	MGCP 1.0 TGCP	5.3(10.201)
Cisco RPM	Trunking Gateway	MGCP 1.0 TGCP	12.4(6) T6
Cisco SUP720-3BXL	IP Core - Cat 7606	—	12.2(17D)SXB4
Cisco uBR 10K	CMTS	CALEA SII	12.3(17b)BC3
Cisco uBR7246VXR	CMTS	PacketCable EM 08	12.3(17b)BC5
Cisco UC500 2811	SS7 Signaling Gateway	SIGTRAN M3UA/SUA	12.4(11)SW3
Cisco UC500 2811	Integrated Services Router SIP PBX	SIP	12.4-11XJ
Cisco VISM-PR	Trunking Gateway	MGCP 1.0 TGCP	3.53(30.200)
Cisco VXSM	Trunking Gateway	MGCP 1.0 TGCP	5.53(10.206)
Cognitronics Cx500/Cx4000	Announcements	—	3.0
IP Unity Harmony 6000	Announcements	MGCP 1.0	3.1.19
IP Unity Harmony 6000	VoiceMail	SIP RFC3261	3.1

Platform(s) Tested	Function(s) Tested	Protocol(s) Tested	Load(s) Tested
IP Unity Harmony 6000	Privacy Director	SIP RFC3261	3.1
JSI CF	—	—	1.5 I01 Prototype v5.0
Linksys PAP2T	ATA	SIP	5.1.15a
Motorola SBV5220	MTA	NCS 1.0 IPSEC	2.16.1.3scm15
Netnumber	ENUM	—	Titan 5.2
Scientific Atlanta DPC2203	MTA	—	dpc2203-P10-14-v2 02r1262-061128asC MCST
Scientific Atlanta Dpx2203	MTA	NCS 1.0 IPSEC	dpx2203-p10-11-v1 12r1151-060803a
SS8 DDE	CALEA	—	3.1.1.40
SS8 SSDF	CALEA	—	4.0.0
Tektronix DQ R7	Network Loop Back, Network Continuity Test	MGCP	7.10 Build 168
Thomson MTA	—	—	—

Operator Access

Operator access to BTS 10200 is available only by secure shell (SSH) session to the EMS. The BTS 10200 supports outbound FTP to other systems. It does not support inbound FTP.

For security purposes, SSH access is limited to the use of defined management interfaces.

BTS 10200 installation and upgrade procedures require you to change default user names and passwords.

Bug Toolkit

To access Bug Toolkit, have an Internet connection, Web browser, and a cisco.com username and password.

To query defects and caveats, follow this procedure:

-
- Step 1** Click [here](#) to log onto Bug Toolkit.
 - Step 2** Click **Launch Bug Toolkit**.
 - Step 3** For a specific caveat, enter the ID number in the “Enter known bug ID” field.
To view all caveats, go to the “Search for bugs in other Cisco software and hardware products” section, and type **BTS** in the Product Name field.
 - Step 4** Click **Next**.
 - Step 5** Select filters to query for caveats.



Note To generalize queries, use the All wildcard for releases, Features/Components, and keyword.

Step 6 Next to version:

- Select **Major** for the major releases (6.0, 5.0, etc.).
- Select **Minor Release** for more specific information—for example, selecting major Version 6.0 and point Version 1 queries for Release 6.0.1 caveats.
- Select **Features or Components** to query.
- Use keywords to search for a caveat title and description.
- Select **Advanced Options**, including Bug Severity level, Bug Status Group, and Release Note Enclosure options.
- Click **Next**.

Bug Toolkit returns caveats based on your query.

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

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