



General Information

The Local Management Tool is a webbased management tool for the @COM Business Manager. It is often referred to as the LMT and allows for full management of all features without the need for any knowledge about Linux or the Asterisk OpenSource PBX®.

All settings for programming the network interfaces, firewall, device provisioning up to the routing of calls can be managed via the LMT. This makes the @COM Business Manager unique compared to other Asterisk OpenSource PBX® based telephony solutions which often require the knowledge of at least Linux to allow setup of the system. The access to the LMT is protected via a username & password and can be granted to normal users by the vendor in three different levels: Standard, Advanced and Expert level. Access to the LMT is regulated by the vendor and most often only granted after attending a LMT training.

General Information

The webbased management tool is available on all of the @COM Business Managers and enables administrators to change the programming of the PBX.

There are 3 different access levels available administrators:

• Standard Administrator

Used by administrators that need to only apply standard changes to the programming of the system every now and then; like changing the names of extensions and their assigned extensions or DID numbers. Usually a four hours training is provided to each user who is granted this access level.

• Advanced Administrator

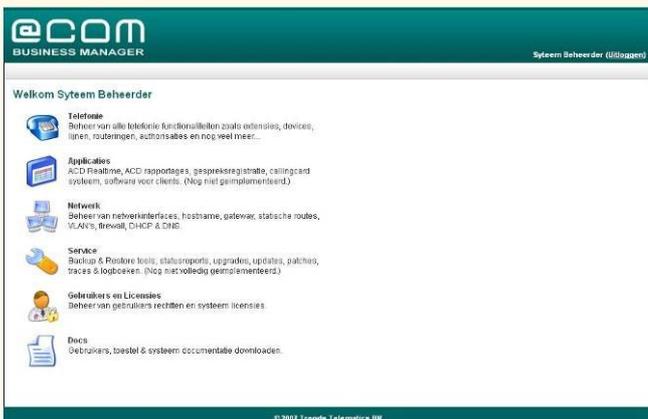
Used by administrators that need to have some more access than the standard administrator but don't need to access all items. By default it allows access to three extra additional menus which are chosen by the vendor or an expert administrator. Usually an eight hours training is provided to each user who is granted this access level.

• Expert Administrator

Used by administrators that need full control over the programming of the system. It allows to the programming of every item in the system. Because of the complexity involved a three days training is usually provided to each user who is granted this access level. The training for this access level is provided by certified vendors and includes basic VoIP & Networking knowledge plus all specific @COM Business Manager knowledge. After successful completion of the training a certificate of technical competence is issued to the trainee.



Access to the LMT is assigned on per user basis and can only be granted to new administrators by an administrator with a higher level of administration access. For more detailed access level information check the minimum access level mentioned for each item under Manageable Items.



Telephony menu

Extensions

• Extension programming (standard)

Includes setting items such as:

- Extension name & number
- Assigned authorization/context
- Type of extension
- DID number
- CLIP number and screening
- Assigned device
- Sub-extension (twinning)
- Assigned voicemail box
- Assigned Call Distribution List (controls the incoming call flow)
- Display in Global address book
- Maximum concurrent calls (call waiting)
- Block the Do Not Disturb feature
- Set the Predefined Call Forwarding number
- Ringtones
- Recall extension for failed blind transfers
- Type of hunt group
- Hunt group members
- Flexworker passwords
- Flexworker automatic log-off time
- Flexworker allowed context for login

These settings apply for these types of extensions:

- Normal extensions
- Hunt groups
- Virtual extensions
- Flexworker extensions

• Extension templates (advanced)

Define templates for use when creating new extensions allowing administrators to save a lot of installation time.

Devices

• Device programming (standard)

Includes setting items such as:

- Call group setting
- Allowed call groups to pickup (pickup groups)

And for fully supported phones only:

- Time zone and date format
- Caller ID number style
- Auto answer options
- Fully disable call waiting
- Hotline number
- Message Waiting Indication options
- Function key programming

• Device programming (advanced)

Includes setting items such as:

- SIP username and password
- Route optimisation
- NAT traversal settings
- Monitor device
- DTMF mode (RFC2833, inband or info)
- Retry dial on busy after x seconds
- Allowed codecs

And for fully supported phones only:

- Microphone levels (phone dependant)
- Dialplan
- Function key programming
- Static Network settings (IP address, subnet, gateway, DNS, vLAN, etc...)
- LDAP programming (phone dependant)

Telephony menu (continued)

Devices (continued)

- **Device templates** (advanced) 
Define templates for use when creating new devices allowing administrators to save lots of installation time.

Trunks & Routes

- **DID & MSN number management** (advanced) 
Includes setting items such as:
 - Create, Edit & Remove DID or MSN numbers
 - Assignment of calendars to DID's
- **Route/Line settings** (advanced) 
Manage the specific settings of trunks/lines connecting the system to the public network, includes setting items such as:
 - Create, Edit & Remove Routes
 - Route Access code
 - Country code, Area code & Subscriber number
 - Default Calling Line Identification Presentation (CLIP) Number & Screening mode per route
 - Route prefix
 - Total amount of channels/lines
 - Reserved channels for inbound traffic
 - Called Party Number (CPN) format for inbound & outbound calls
 - Calling Line Identification Presentation (CLIP) format for inbound & outbound calls
 - Join Route Settings
 - Assigned & Activated DID/MSN numbers
 - Include DID number from other routes (used when joining routes)
 - Authorized trunks
- **Trunk/Gateway Settings** (advanced) 
Manage the registration of devices used for trunks, includes setting items such as:
 - Name and Gateway type (registrar/client)
 - Authentication type & security level
 - SIP username and password
 - SIP proxy
 - Monitor peer
 - Maximum concurrent calls
 - Route optimisation
 - NAT traversal settings
 - DTMF mode (RFC2833, inband or info)
 - Allowed codecs (incl. T.38 support)

Call routing

- **Call Distribution Lists (CDL)** (standard) 
Manage the inbound call behavior of call to extensions, includes setting items such as:
 - Overview and Assignment of Call Distribution Lists to extensions
 - Management of Call Distribution Lists (CDL)
- **Least Cost Routing (LCR)** (advanced) 
Manage the outbound call behavior of calls to the public network or other @COM Business Managers, includes setting items such as:
 - Assign a route to a specific public phone number
 - Define the best route per public phone number
 - Define emergency number prioritisation
 - Convert dialed phone numbers to correct format for public network

Authorizations

- **Call groups** (standard) 
Group devices used for call pickup and camp on features:
 - Assign a name
 - Assigned devices per call group
- **Contexts** (standard) 
Define the authorization for extensions assigned to certain contexts, includes settings such as:
 - Allowed Traffic Classes (which public number may be dialed?)
 - Allowed Services and Features
 - Allowed calls to other extensions
 - Allow the use of flexworking on assigned extensions
- **Traffic Classes** (advanced) 
Manage which public phone numbers can be dialed:
 - Assign a name
 - Assign the appropriate LCR rules and order

Telephony menu (continued)

Authorizations (continued)

- **Connection Groups** (advanced) 
Control the maximum amount of calls per group of devices in order to prevent overloading for example DSL lines:
 - Assign a name
 - Define maximum calls per connection group
 - Assign devices to the connection group.
 - Assign trunks to the connection group

Extra

- **Voicemail boxes** (standard) 
Manage the voicemail box settings:
 - Create, Modify and Remove voicemail boxes
 - Edit the assigned name
 - Set email address for sending voicemails as attachment
 - Turn off/on sending of attachment
 - Turn off/on deletion of message after sending as attachment via email
 - Set notification email address (no attachments)
 - Use voicemail box in directory service
 - Re-initialize on next login
 - Assign extension to menu options "*" & "0"
- **Music on Hold** (standard) 
Manage the music on hold files on the system:
 - Upload music on hold in WAV or MP3 format (file size: 5Mb max.)
 - Define volume of Music on Hold per upload
 - Default Music on Hold to standard FreeMusic® sound files
- **Announcements** (standard) 
Manage announcements used by the system:
 - Create, Modify and Remove announcements
 - Edit the assigned name
 - Record announcements via phone
 - Upload announcements in WAV or MP3 format (file size: 5Mb max.)
 - Edit announcement specific properties
- **Custom Scripts** (expert) 
Create custom scripts in the Asterisk Dialplan Language. This requires extensive Asterisk programming knowledge and therefore is only available to expert administrators
- **Automated Attendant (AA)** (standard) 
Manage Automated Attendants and their menu options:
 - Create, Modify and Remove automated attendants
 - Assign a name
 - Set the announcement
 - Set the timeout and timeout destination
 - Set the menu option destinations
 - Set the destination for invalid options
- **Automated Call Distribution Groups (ACD)** (advanced) 
Manage ACD Groups and the specific settings:
 - Create, Modify and Remove ACD groups
 - Assign a name
 - Assign an announcement
 - Set the timeout and timeout destination
 - Set the queue priority
 - Set the maximum waiting callers
 - Set queue strategy: "ring all", "cyclic", "cyclic from last agent", "random", "agent with least recent call" or "agent with least amount of calls"
 - Service Level Period
 - Set maximum ring time at available agents
 - Set wrap up time
 - Set announcement to play to agents on answer of calls from queue
 - Set the assigned ACD agents and order
 - Set queue to no longer play MOH and announcement, but ringing instead.
 - Set time interval to playback the "please hold" announcement
 - Set time interval to playback the callers position in the queue
 - Set time interval to playback the average wait time to callers
 - Set rounding of the average hold time
 - Change the assigned default announcements of a queue
 - Configure when ACD overflow should occur
 - Announce hold time to agents
 - Allow Call Waiting for agents
- **Automated Call Distribution Agents (ACD)** (advanced) 
Manage ACD Agents and the specific settings:
 - Create, Modify and Remove ACD agents
 - Set an agent number
 - Set an agent name
 - Set the agent password

Telephony menu (cont.)

Settings

• Global Settings (advanced)



Manage the global telephony settings:

- System ID used in MLS - Multiple Server configurations
- System Name
- Allow activation of Predefined Call Forwarding via CLIP
- Play MOH on blind transfers instead of ringing
- Play MOH on blind transfers only if destination is busy
- Call Detail Recording level (CDR)
- Delete CDR & ACD record after x time
- Set global ringtone settings
- Set nominal extensions length
- Set intercept extension
- Program when to recall to intercept extension: "on busy", "no answer", "not reachable", "calls to unassigned DID/MSN numbers" or "unanswered recalls"
- Extensions allowed to change calendar states (override option)
- DISA Service extension, context and outbound context
- Directory Service extension, context and outbound context
- Voicemail Service extension, context and outbound context
- Record Service outbound context
- Manage system passwords
- Manage system timers; "recall", "parking timeout", etc...
- Default emergency extensions and routes
- Enable HTTP posting of Call Details
- Edit HTTP posting URL's (expert administrator only)
- Use ENUM database lookup
- Define ENUM registrar address



• Calendars Settings (standard)

Manage the calendars assigned to DID numbers that determine which CDL to use for inbound calls at a certain time of day:

- Create, Modify and Remove Calendars
- Assign a name
- Set open times per weekday and calendar
- Set lunch times per weekday and calendar
- Set special times such as holiday and closed due to meetings, etc...



• SIP Settings (advanced)

Specific SIP based settings for the whole system:

- Bind to IP-address / port
- Set SIP security parameters such as local domain, sip realm, etc...
- Set default language used for announcements on the system
- Set jitter buffer parameters
- Set SIP timers and timeouts
- Set SIP voicemail name and message check interval
- Set Video codec support
- Set T.38 codec support
- Set RTP keep alive and timeout parameters
- Set Public IP address to use in NAT Traversal
- Set allowed local networks for SIP traffic



• Voicemail Settings (advanced)

Manage the global voicemail service options & features:

- Set the Voicemail server sender name for emails
- Set the Voicemail server "reply" address for emails
- Setup the email subject (per supported language)
- Setup the layout of the email body (per supported language)
- Set default maximum number of messages per mailbox
- Set maximum length of a message
- Set minimum length of a message
- Set maximum length of greetings
- Set maximum silence period in a message
- Allow the use of the Directory Service
- Play summary to voicemail users
- Announce Caller ID before playback of message
- Announce message length before playback of message
- Set minimum message length needed to announce message length
- Allow sending new messages from a users mailbox
- Allow callers to review or re-record their message
- Announce to users if temporary greeting is activated



Network & System Services menu

Network

• General Settings (advanced)

Manage the global network settings:

- System hostname
- IP address for Voice LAN
- Default gateway
- Primary & Secondary DNS servers
- System DNS suffix
- System Time zone
- Primary & Secondary NTP servers
- Mail relay server (with test function)
- Enable routing function
- Enable firewall function
- Enable TFTP server



• Network interfaces (advanced)

Manage the available network interfaces on the system:

- Set IP parameters (IP address, subnet or DHCP client)
- Assign a name
- Activate NAT on this interface
- Set Layer 3 QoS DiffServ settings for SIP and RTP traffic
- Set link speed



• VLAN interfaces (advanced)

Manage possibly existing VLAN interfaces:

- Create, Edit & Remove VLAN interfaces
- Set VLAN ID and assign to specific Network Interface
- Set IP parameters (IP address, subnet or DHCP client)
- Activate NAT on this interface
- Set Layer 3 QoS DiffServ settings for SIP and RTP traffic



• Static routes (advanced)

Manage static routes on the system per network interface.



Network Services

• DHCP Server (advanced)

Manage the integrated DHCP server(s):

- Create, Edit & Remove DHCP Server scopes per interface
- Create, Edit & Remove Advanced DHCP Server scopes for DHCP Relay



• DNS Server (advanced)

Manage the integrated DNS server:

- Modify the current "Master" zone
- Add DNS records to the master zone (type: A, MX & CNAME)
- Create, Edit & Remove "Forward" zones



• Firewall (advanced)

Manage the integrated firewall:

- Create, Edit & Delete firewall for specific interfaces
- Easy allow or blocking of commonly use types of traffic
- Create custom ACCEPT/DROP rules



Telephony Services

• Global address book (standard)

Manage the global address book entries, allow for:

- Create, Edit & Delete entries
- Change entry name
- Assign a first and or last name
- Assign a telephone number
- Assign a cell phone number



• Global address book synchronization (advanced)

Manage the synchronization of the Global address book with other @COM Business Managers or the Microsoft Active Directory
For more information see the specific datasheets for these features.



• @COM Connect (advanced)

Manage the @COM Connect CSTA/XML service:

- Start/Stop the service
- View @COM Connect License status
- Define default Phone model (if unknown)
- Define default context for dialing out (if unknown)
- Define default transfer context (if unknown)
- Define logging level
- Define standard ringtone for attendant phones



Application menu

The application menu allows access to the different applications available on the @COM Business Manager. Most of these applications can be accessed directly using a specific URL. However management of the applications properties is done via the Local Management Tools web interface

- **@COM Billing** (special application access rights) 
Set the properties and access to the administration of the @COM Billing feature. Access to the settings of the billing application is granted to all administrators, but access to any billing information or transactions is limited only to billing application administrators or advanced & expert administrators for security reasons.
Please read the @COM Billing datasheet for more information.
- **Reporting** (advanced) 
Manage the reports and scheduling of reports.
Download scheduled reports or the Crystal Reports Viewer.
Please read the @COM Reporting datasheet for more information.
- **ACD Wallboard** (standard) 
A direct URL link to the ACD Wallboard Application
- **ACD Agent Application** (standard) 
A direct URL link to the ACD Client Application
- **Presence board** (advanced) 
A direct URL link to the ACD Wallboard Application and access to the configuration of the presence board feature:
 - Create, Edit & Remove extension groups / tabs
 - Assign extensions to a group / tabs

Users & Administrators menu

The Users & Administrators menu allows access to the configuration of administrators of the @COM Business Manager and it's application and to the management of the user using applications like the Personal Call Manager.

Administrators

- **Current Administrator** (standard) 
Change the current administrators password and email
- **Administrators** (standard) 
Manage administrators with lower access levels then your own on this system.
 - Create, Edit & Remove administrators & application managers/users
 - Assign first and last name
 - Assign email address
 - Select a administrator access level (profile)
 - Set the password

Users

- **Users** (standard) 
Manage the privileges and settings of users.
Set their name, phone numbers, email addresses and applications.
Per user these next items can be administered:
 - Create, Edit & Remove users
 - Assign first, last and full name
 - Assign extension
 - Assign cell phone number
 - Assign user language
 - Define allowed application such as the Personal Call Manager
 - Define username & password for logging onto applications
- **User defaults** (advanced) 
Set default language and password and allow setting items:
 - Automatically change assigned extension name on username change
 - Copy cell phone number to predefined forwarding number of extension
- **User synchronization** (advanced) 
Manage the Microsoft Active Directory User synchronization
For more information see the specific datasheets for these feature.

Maintenance menu

- **Backup & Restore** (advanced) 
Backup and Restore the programming of the @COM Business Manager. There are five different types of which can be individually backup or restored:
 - **Telephony**
Includes all items settable via the telephony menu
 - **Network**
Includes all items settable via the networking menu
 - **Telephony & Network**
Combination of the telephony and network backup/restore
 - **Call Detail Records**
Includes all Call Details Records and ACD logging
 - **All**
Includes everything there is to backup, including firmware of devices

Note: An expert administrator is also capable of resetting all five different types to their default settings
- **Software** (expert) 
Apply patches, updates or upgrades for the system improving it's performance or adding new features.
- **Firmware** (expert) 
Manage firmware for fully supported devices of the @COM Business Manager, such as the Snom & SwissVoice phones.
Deploy the firmware for these devices via the LMT instead doing this manually via the web interface of the device itself.
- **Traces & Log files** (expert) 
Create traces for analyzing possible problems within the system. Allows creating PCAP traces, Syslog traces and extensive Asterisk traces. Traces can be downloaded as compressed files or send via email to developers for further analysis.
Log files are also available for nearly every service within the system.
- **Tools** (advanced) 
This menu option allows an administrator to restart part of the system or the whole server. It also features an option to parse the full configuration from the database to configuration files on the server preventing a possible mismatch in the configuration.
- **Dimensioning** (standard) 
Manage the license keys activated on the system which determine the total amount of features and devices allowed on the system (alias: dimensioning)

Documentation menu

The documentation menu provides online documentation for the @COM Business Manager; this includes User manuals, System documentation and Service documentation.
The documentation may be available in multiple languages and updates are regularly provided via documentation patches.

Note:

The documentation is considered online because it can be downloaded from the @COM Business Manager using any web browser in your organization. However on the @COM website more online documentation can be found which is also up to date to the latest release, see: <http://www.at-com.nl/eng>

