

Dialogic® HMP Software and Dialogic® Diva® SDK

Installation and Configuration Guide

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About This Publication

How to use this guide

- To view a section, click the corresponding bookmark located on the left.
- To view a topic that contains further information, click the corresponding blue underlined phrase.
- You may wish to print out the pages required for developing your communication application.

Structure of this guide

This guide presents installation and configuration procedures for the Dialogic® Host Media Processing (HMP) software and the Dialogic® Diva® Software Development Kit (SDK). This guide is structured as follows:

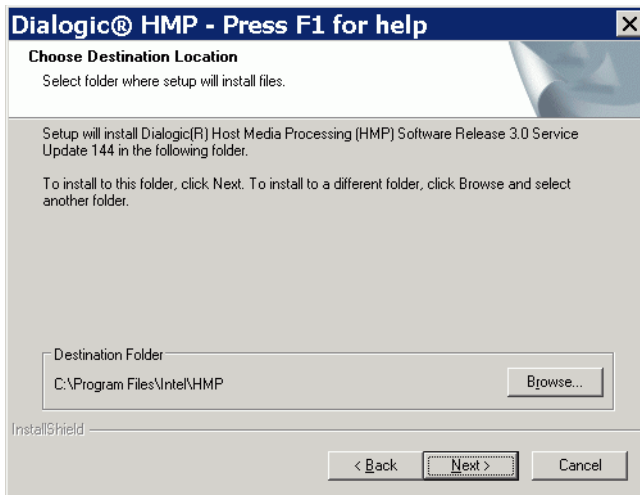
Section	Contents
Installing the Dialogic® HMP Software	Installation of the Dialogic HMP software using the setup wizard.
Activating the Dialogic® HMP Software License	Activation of the license in the Dialogic HMP software License Manager.
Starting the Dialogic® HMP Software	Manual or automatic start of the Dialogic HMP software service.
Installing and Configuring the Dialogic® Diva® SDK	Installation and configuration of the Diva SDK, including samples of configuration files.

CHAPTER 1

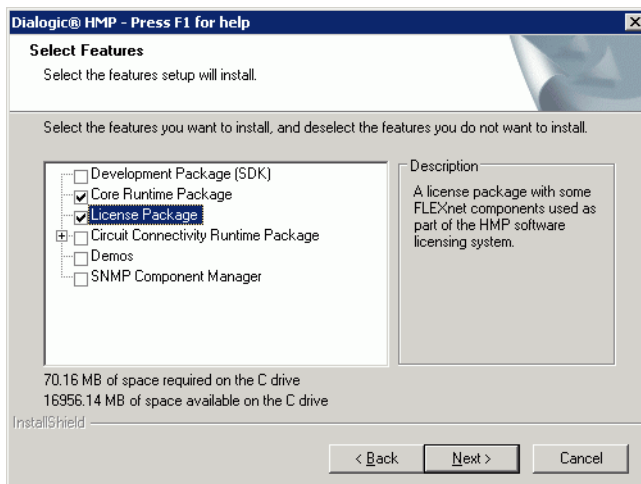
Installing the Dialogic® HMP Software

Before you can install the Dialogic HMP software, you need to download the latest system update available from the Dialogic web site at http://www.dialogic.com/products/ip_enabled/hmp_software.htm. To install the software, do the following:

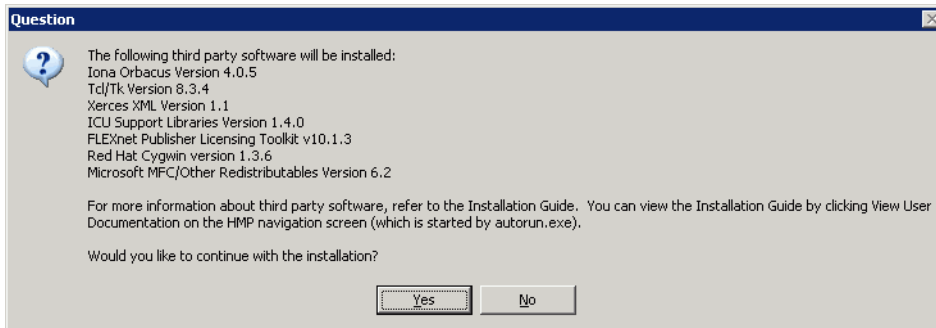
1. Extract the downloaded ZIP file to a directory on the local hard drive.
2. Go to the directory to which you extracted the files, and double-click "setup.exe" to start the installation procedure.
3. In the welcome dialog box, click **Next**.
4. In the **Choose Destination Location** box, you can confirm or change the installation directory.



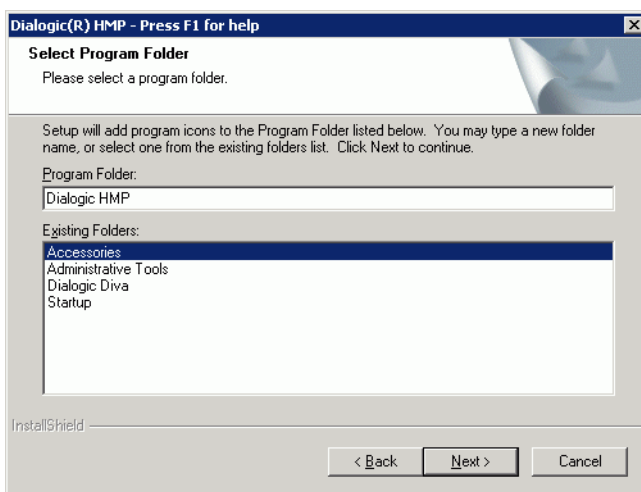
5. In the **Select Features** box, you need to select at least **Core Runtime Package** and **License Package**. Both features are mandatory for the Dialogic® Diva® Software Development Kit.



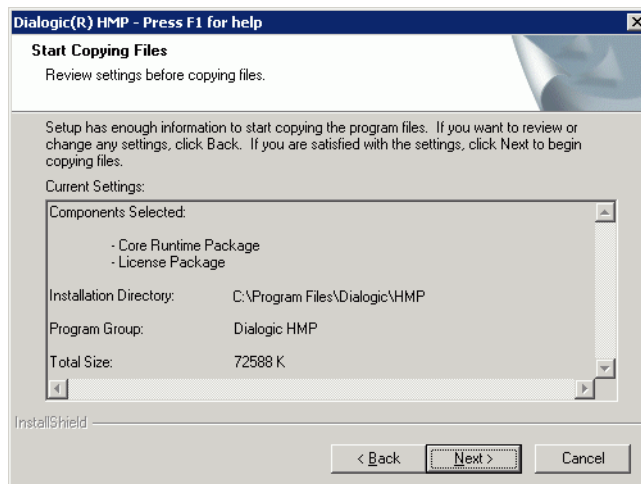
6. A dialog box will appear, asking you to confirm the information about 3rd party software installed with the Dialogic® HMP software.



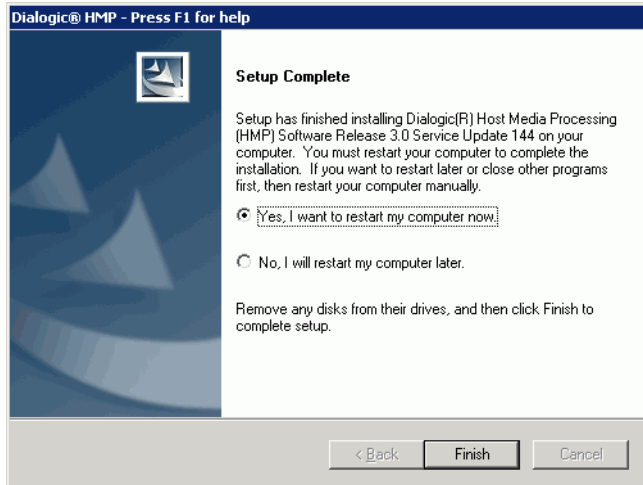
7. In the **Select Program Folder**, type "Dialogic HMP" in the **Program Folder** field, and click **Next**.



8. In the **Start Copying Files** box, click **Next** to start the installation process.



9. After the installation is finished, the **Setup Complete** box appears, where you are asked to restart your PC. Click **Finish** to do so. The restart is necessary to complete the installation of the drivers.



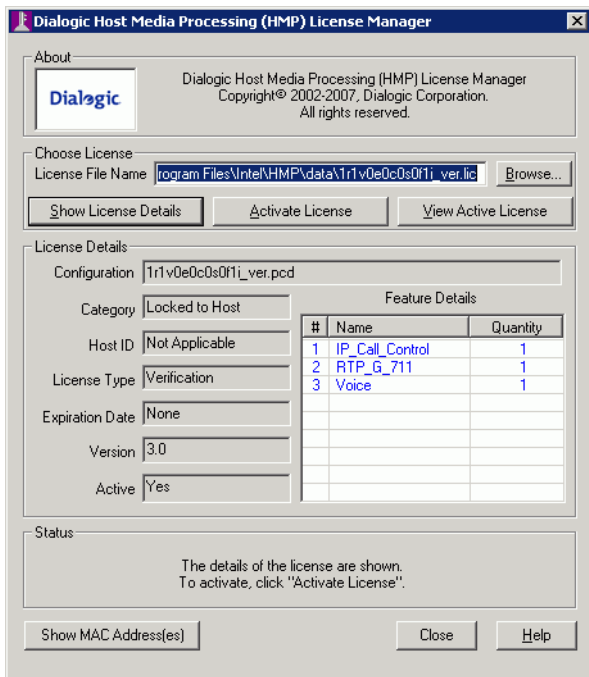
Before you can use the Dialogic® HMP software, you need to activate the license. See [Activating the Dialogic® HMP Software License](#) on page 12 for more information.

CHAPTER 2

Activating the Dialogic® HMP Software License

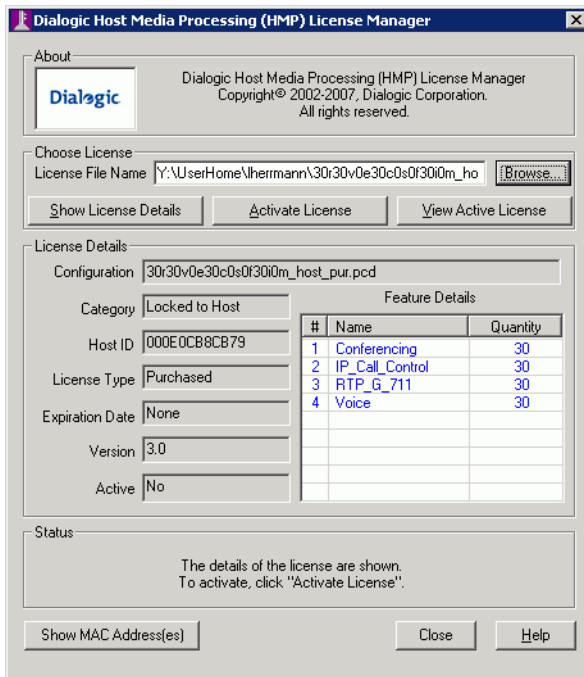
The Dialogic® HMP software is delivered with a demonstration license for one channel, which is activated by default. This license allows for making a voice call on one channel using H.323 or SIP. If you need more than one channel, you need to request a license from Dialogic. After receiving the license, you need to activate it as follows:

1. Copy the license file to your local hard drive.
2. Open the Dialogic® HMP Software License Manager via **Start > Programs > Dialogic HMP > HMP License Manager**.

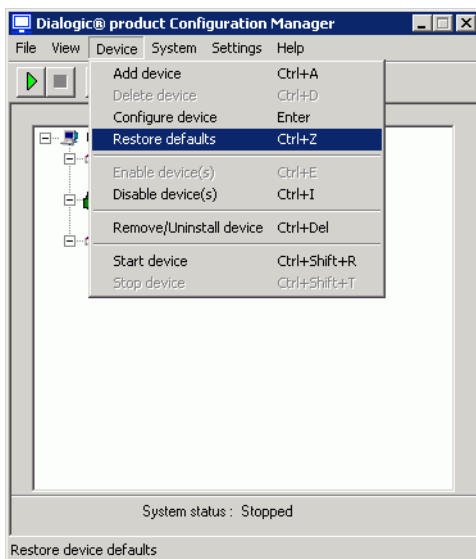


3. Under **Choose License**, the path to the default license file is displayed. Click **Browse** and go to the directory on your local hard drive in which you saved the license file, select the license file, and click **Open**.

- Once the license is added, the license details are displayed under **Feature Details**.

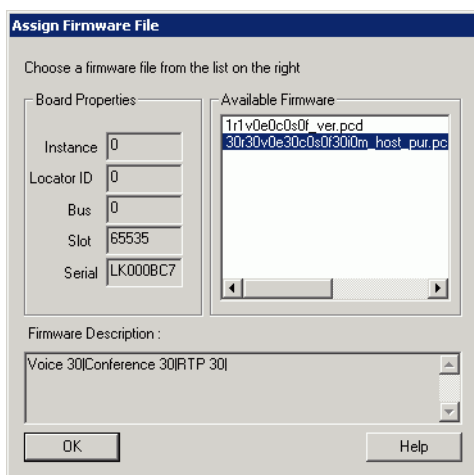


- Click **Show MAC Address(es)** and ensure that the displayed MAC address matches the **Host ID** of the license.
- Click **Activate License** and after the activation process is finished, close the License Manager.
- Open the Dialogic® Configuration Manager (DCM) via **Start > Programs > Dialogic HMP > Configuration Manager - DCM**.
- Select **HMP_Software #0 in slot <slot number>** and then click the **Device** menu and select **Restore defaults**.



- Confirm the information in the displayed dialog box with **OK**.

10. The **Assign Firmware File** box is displayed. The new license is highlighted under **Available Firmware**.




Confirm the selection with **OK**.

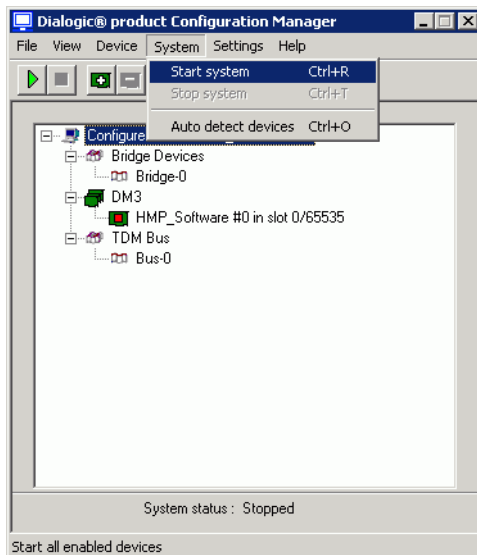
The license is now active and the Dialogic® HMP software can be started. See [Starting the Dialogic® HMP Software](#) on page 15 for more information.

CHAPTER 3

Starting the Dialogic® HMP Software

By default, the manual start mode is selected, which means that the Dialogic® HMP software service is not started when the host computer starts, and you need to start the Dialogic HMP software before using it:

1. Open the Dialogic® Configuration Manager (DCM) via **Start > Programs > Dialogic HMP > Configuration Manager - DCM**.
2. Click either the  button (Start all enabled devices) or the **System** menu and then **Start system** as shown in the following screen.

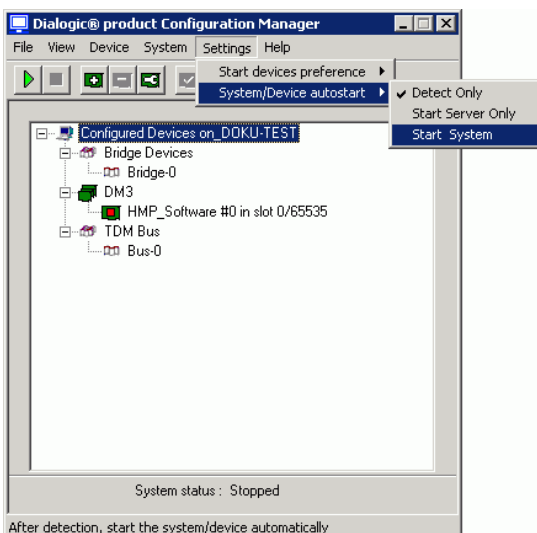


3. You can also configure the Dialogic HMP software to start automatically when booting the host computer. See the description below for more information.

Setting Auto Start Mode for Dialogic® HMP software

The Dialogic HMP software can be configured to start when booting the host computer. To accomplish this:

1. Open the Dialogic® Configuration Manager (DCM) via **Start > Programs > Dialogic HMP > Configuration Manager - DCM**.
2. Click the **Settings** menu and then **System/Device autostart > Start System**.



CHAPTER 4

Installing and Configuring the Dialogic® Diva® SDK

Dialogic® Diva® SDK installation

To install the Diva SDK:

1. Go to the Diva SDK directory tree.
2. Open the "basic\bin" folder and double-click the "Config.exe" file.
3. The **Configuration** dialog box appears and displays the version of the formerly installed SDK, if any, and the version of the new SDK. Click **Update** to install the latest SDK runtime.
4. After the files are installed, click **OK** to close the dialog box.

Default configuration

By default, the Diva SDK automatically detects all installed Dialogic® Diva® Media Boards and the Dialogic® HMP software. For all Diva Media Boards, the configuration is done in the Dialogic® Diva® Configuration Manager. For the Dialogic HMP software, the default configuration is the following:

- Use all licensed IP channels for SIP
- Use the default IP address
- Use standard SIP port 5060
- No Proxy is defined
- No registration at registrar server(s)

Customized configuration

The Dialogic® Diva® SDK allows for overwriting the existing defaults with a configuration file. The configuration file is XML-based, needs to be named "DSSDK.XML", and needs to reside in the same path as the "DSSDK.DLL", which is typically installed to "%WINDIR%\System32".

The Diva SDK supports multiple line devices, which are the E1/T1 trunks or the BRI interfaces of the Dialogic® Diva® Media Boards. For the Dialogic® HMP software, a line device can support either SIP or H.323, and multiple line devices can be configured, e.g., multiple devices using SIP but different proxy server.

The format of the XML files is shown in the [Samples for configuration files](#) on page 18. The tables from page 17 and after provide the information about the configuration options.

Note: The common parameters and the H.323 gatekeeper parameters can only be specified once. The SIP registrar parameters may be specified for multiple registrar servers.

Common parameter

Name	SIP/H.323	Description
NetworkInterface	SIP/H.323	Specifies the IP address to be used. If this field is empty, the default IP address is used.
Channels	SIP/H.323	Specifies the amount of channels for this line device. The channels for all configured line devices must not exceed the amount of licensed IP channels. By default, the licensed channels are used.
SignalingProtocol	SIP/H.323	The signaling protocol is either SIP or H323. By default, SIP is used.
SignalingPort	SIP/H.323	If the default port should not be used, specify the port. The default depends on the signaling protocol.
SignalingTransport Protocol	SIP/H.323	Either UDP or TCP, the default is UDP.
FaxEnableClear Channel	SIP/H.323	If set to YES, the clear channel fax mode is enabled. By default, only T.38 is enabled. The application can overwrite this parameter on a per call base.
OutboundInitial MediaVoice	SIP/H.323	If the switch does not support T.38 as initial media, but the application dials with fax immediately, the calls would fail. If this option is set to yes, the Diva SDK will initiate the call as voice first and then switch to fax. This allows existing applications to run unchanged.
IgnoreAlertRequest	SIP/H.323	If the option IgnoreAlertRequest is enabled, a call to DivaAlert done by the application is ignored. This allows existing applications sending alerts to run in environments where proxy or gatekeeper run into problems with alerting. The default value is NO.
ProxyIPAddress	SIP	Optional parameter, specifies the IP address of a proxy server. If set, the host name is ignored.
ProxyPort	SIP	Optional parameter, specifies the port of a proxy server.
ProxyHostname	SIP	Optional parameter, specifies the host name of a proxy server. It is used only if the ProxyIPAddress is not set.
ProxyUser	SIP	User name for authentication at the configured SIP proxy server.
ProxyPassword	SIP	Password for authentication at the configured SIP proxy.
ProxyRealm	SIP	Realm for authentication at the configured SIP proxy. Only necessary if different from the proxy domain.
AutoDiversion	SIP	If set to YES, the Diva SDK will handle the diversion implicit. By default, no diversion is done and the request is rejected. The application can overwrite this parameter on a per call base.
MaxRegistrations	SIP	Specifies the maximum amount of registrations at registrar servers.
EnableTransparent Addresses	SIP	The parameter specifies how SIP addresses of incoming calls, for which no mapping is found, are passed to the application. If set to "YES", the addresses are passed unchanged to the application. If set to "NO", the system will try to extract the number information and pass it to the application. The default value is "NO".
DefaultFromAddress	SIP	The parameter DefaultFromAddress specifies the local address to be used for SIP-based calls if the application does not specify a local or calling number for an outgoing call. The address must be a valid SIP address.
GatewayIPAddress	H.323	Optional parameter of an H.323 gateway. If specified, all requests that do not contain the TA: <ip address> notation are sent to the gateway.
GatewayPort	H.323	Optional parameter, specifies the port number of the H.323 gateway.
H245Channel Optional	H.323	The parameter H245ChannelOptional specifies that the H.245 channel establishment is optional in fast start connections. The default value is NO.
H323MediaWaitFor Connect	H.323	The parameter H323MediaWaitForConnect specifies that no fast start is enabled. Therefore the media is established after the signaling.

SIP registrar

Name	Description
RegistrarAddress	IP address of the registrar server. IP address and port name or full name for optional port.
UserID	User part of SIP address used for "From:" and "To:" fields.
Domain	Domain part of the users public SIP address.
Password	Password for the authentication at the registrar server.
AuthorizationUser	If a different user name than the one specified for the UserId is required for authentication, it must be specified here.
AuthorizationRealm	Realm used by the registrar server when authentication is requested. If the registrar uses the domain name as realm, this parameter can be left empty.
DisplayName	Optional name used for the registrar request. This parameter can be left empty.
AutoRefreshInterval	Time for re-registration in seconds. The default is 3600 seconds.

H.323 gatekeeper

Name	Description
GatekeeperAddress	The address or name of the gatekeeper. This may be an IP address with or without the port number or a DNS name.
EndpointType	Endpoint type with possible values "Terminal" or "Gateway".
Aliases	The H.323 aliases for this endpoint, which need to be separated by a comma. The names may contain spaces.
Prefixes	Prefixes according to H.323. Only valid for the EndpointType "Gateway".
Number	Specifies a comma separated list of numbers that should be routed to this endpoint.
Name	The name specifies the H.323 ID.
AutoRefreshInterval	Specifies the time for re-registration in seconds. The default is no repetition.

For compatibility with existing applications, the Dialogic® Diva® SDK allows for mapping phone numbers to SIP or H.323 addresses. For each device, multiple MAP entries can be added, which have the following syntax:

```
<Map>
  <Number>123</Number>
  <Address>sip:joe.smith@cia.org</Address>
</Map>
```

Samples for configuration files

The following sample configuration files show a configuration for the following scenarios:

- One Line device using SIP and two registrar servers.
- One line device using H.323, a gateway and a gatekeeper.
- Two line devices, one for SIP and another for H.323. Other parameters as done before.

One line device using SIP

The sample shows the configuration for a 120 channel license of the Dialogic® HMP software, which uses all channels for SIP. The local IP address is 192.168.0.100 and the registrar server is available at the address 192.168.0.100. Two users are registered at the same registrar server.

```
<DivaAPIConfiguration>
  <Device>
    <NetworkInterface>192.168.0.100</NetworkInterface>
    <Channels>120</Channels>
    <SignalingProtocol>SIP</SignalingProtocol>
    <SignalingPort />
    <SignalingTransportProtocol>UDP</SignalingTransportProtocol>
    <ProxyIPAddress />
    <ProxyHostname />
    <ProxyPort />
    <MaxRegistrations>10</MaxRegistrations>
    <GatewayIPAddress />
    <GatewayPort />
    <Registrar>
      <RegistrarAddress>192.168.0.10:5061</RegistrarAddress>
      <Domain>192.168.0.10</Domain>
      <UserID>700</UserID>
      <Password>test</Password>
      <AuthorizationUser />
      <AuthorizationRealm>user</AuthorizationRealm>
      <DisplayName>700</DisplayName>
      <AutoRefreshInterval>360</AutoRefreshInterval>
    </Registrar>
    <Registrar>
      <RegistrarAddress>192.168.0.100:5061</RegistrarAddress>
      <Domain>192.168.0.100</Domain>
      <UserID>600</UserID>
      <Password>test</Password>
      <AuthorizationUser />
      <AuthorizationRealm>user</AuthorizationRealm>
      <DisplayName>600</DisplayName>
      <AutoRefreshInterval>360</AutoRefreshInterval>
    </Registrar>
    <Map>
      <Number>100</Number>
      <Address><Joe.Smith> sip:joe.smith@company.com</Address>
    </Map>
  </Device>
</DivaAPIConfiguration>
```

One line device using H.323

The sample shows the configuration for a 120 channel license of the Dialogic® HMP software, which uses all channels for H.323. The local IP address is 192.168.0.100 and the gatekeeper is available at the address 192.168.0.200. A gateway is available at the same address. All calls with a plain phone number are established via the gateway. Only the number "123" is mapped to the endpoint 192.168.0.20.

```
<DivaAPIConfiguration>
  <Device>
    <NetworkInterface>192.168.0.100</NetworkInterface>
    <Channels>120</Channels>
    <SignalingProtocol>H323</SignalingProtocol>
    <SignalingPort />
    <SignalingTransportProtocol>UDP</SignalingTransportProtocol>
    <ProxyIPAddress />
    <ProxyHostname />
    <ProxyPort />
    <MaxRegistrations />
    <GatewayIPAddress>192.168.0.200</GatewayIPAddress>
    <GatewayPort />
    <Gatekeeper>
      <GatekeeperAddress>192.168.0.200</GatekeeperAddress>
      <EndpointType>Terminal</EndpointType>
      <Number>500</Number>
      <Name>Test</Name>
      <AutoRefreshInterval>360</AutoRefreshInterval>
    </Gatekeeper>
    <Map>
      <Number>123</Number>
      <Address>TA:192.168.0.20;TEL:123</Address>
    </Map>
  </Device>
</DivaAPIConfiguration>
```

Two line devices using SIP and H.323

The sample shows the configuration for a 120 channel license of the Dialogic® HMP software. Two line devices will be created, one for SIP and another for H.323. Each line device uses 60 channels. The capabilities of the single devices match the options in the previous samples.

```
<DivaAPIConfiguration>
  <Device>
    <NetworkInterface>192.168.0.100</NetworkInterface>
    <Channels>60</Channels>
    <SignalingProtocol>SIP</SignalingProtocol>
    <SignalingPort />
    <SignalingTransportProtocol>UDP</SignalingTransportProtocol>
    <ProxyIPAddress />
    <ProxyHostname />
    <ProxyPort />
    <MaxRegistrations>10</MaxRegistrations>
```

```
<GatewayIPAddress />
<GatewayPort />
<Registrar>
  <RegistrarAddress>192.168.0.10:5061</RegistrarAddress>
  <Domain>192.168.0.10</Domain>
  <UserID>700</UserID>
  <Password>test</Password>
  <AuthorizationUser />
  <AuthorizationRealm>user</AuthorizationRealm>
  <DisplayName>700</DisplayName>
  <AutoRefreshInterval>360</AutoRefreshInterval>
</Registrar>
<Registrar>
  <RegistrarAddress>192.168.0.10:5061</RegistrarAddress>
  <Domain>192.168.0.10</Domain>
  <UserID>600</UserID>
  <Password>test</Password>
  <AuthorizationUser />
  <AuthorizationRealm>user</AuthorizationRealm>
  <DisplayName>600</DisplayName>
  <AutoRefreshInterval>360</AutoRefreshInterval>
</Registrar>
<Map>
  <Number>100</Number>
  <Address><Joe.Smith> sip:joe.smith@company.com</Address>
</Map>
</Device>
<Device>
  <NetworkInterface>192.168.0.100</NetworkInterface>
  <Channels>60</Channels>
  <SignalingProtocol>H323</SignalingProtocol>
  <SignalingPort />
  <SignalingTransportProtocol>UDP</SignalingTransportProtocol>
  <ProxyIPAddress />
  <ProxyHostname />
  <ProxyPort />
  <MaxRegistrations />
  <GatewayIPAddress>192.168.0.200</GatewayIPAddress>
  <GatewayPort />
  <Gatekeeper>
    <GatekeeperAddress>192.168.0.200</GatekeeperAddress>
    <EndpointType>Terminal</EndpointType>
    <Number>500</Number>
    <Name>Test</Name>
    <AutoRefreshInterval>360</AutoRefreshInterval>
  </Gatekeeper>
  <Map>
    <Number>123</Number>
```

```
<Address>TA:192.168.0.20;TEL:123</Address>  
</Map>  
</Device>  
</DivaAPIConfiguration>
```