Abstract

These Application Notes document the configuration steps necessary to enable the Konftel 300 conference unit to interoperate with Avaya IP, digital, and analogue telephones controlled by an Avaya Communication Server Integral 5. The Konftel 300 attaches to an analogue port of the Avaya Communication Server Integral 5 and enables meeting or conference participants to participate simultaneously in a telephone conversation.

Information in these Application Notes has been obtained through DevConnect compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.
1. Introduction

The purpose of these Application Notes is to illustrate how the Konftel 300 conference unit can be used within a telephone system consisting of Avaya IP, digital, and analogue telephones controlled by an Avaya Communication Server Integral 5. The Konftel conference unit attaches to an analogue port of the Avaya Communication Server Integral 5, and contains a microphone and loudspeaker which effectively extend the range from which the telephone can be used to include an area of 30 square meters. Placed within a conference room, the Konftel unit enables all of the participants in the room to take part in a telephone conversation. The unit also performs echo cancellation to avoid feedback problems which might otherwise occur.

This document details the compliance testing with the Konftel 300, including the test configuration, test procedure, and the test results. The diagram below depicts the configuration used for compliance testing.

![Test Configuration Diagram]

**Figure 1: Test Configuration**

The configuration that was used for testing consists of an Avaya Communication Server Integral 5. The Avaya telephones and the Konftel 300 were located at physically separate locations to ensure that sound from the test location could not be heard other than via the telephone connection.
The following table contains additional information about each of the telephone endpoints contained in the above diagram:

<table>
<thead>
<tr>
<th>Phone</th>
<th>Ext</th>
<th>PSTN Number</th>
<th>Endpoint</th>
<th>Interface</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>24</td>
<td>069 9732801002 ...</td>
<td>Konftel 300</td>
<td>analogue</td>
</tr>
<tr>
<td>B</td>
<td>17</td>
<td></td>
<td>Avaya digital T3.24 Comfort</td>
<td>ISDN/S0</td>
</tr>
<tr>
<td>C</td>
<td>23</td>
<td></td>
<td>Avaya analogue T3 Standard</td>
<td>analogue</td>
</tr>
<tr>
<td>D</td>
<td>70</td>
<td></td>
<td>Avaya IP T3 IP II Comfort</td>
<td>H.323</td>
</tr>
<tr>
<td>E</td>
<td></td>
<td>069 7505 6898</td>
<td>ISDN telephone</td>
<td>ISDN/S0</td>
</tr>
</tbody>
</table>

Table 1: Extensions Used for Testing

2. Equipment and Software Validated

The following equipment and software were used for the sample configuration:

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Software Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avaya Communication Server Integral 5</td>
<td>AR 2.450 DE</td>
</tr>
<tr>
<td>Avaya Integral Service Application (ISA)</td>
<td>V 4.500-GB</td>
</tr>
<tr>
<td>Avaya Digital (ISDN) Telephone T3.24 Comfort</td>
<td>V02_01</td>
</tr>
<tr>
<td>Avaya Analogue Telephone T3 Standard</td>
<td>-</td>
</tr>
<tr>
<td>Avaya IP Telephone T3 IP II Comfort</td>
<td>T212_0DE.h4i</td>
</tr>
<tr>
<td>Konftel 300</td>
<td>1.8.469 EU</td>
</tr>
</tbody>
</table>

Table 2: Version Numbers of Equipment and Software

3. Configure Avaya Communication Server Integral 5

The configuration and verification operations illustrated in this section were performed using the Avaya Integral Service Application (ISA) tool on a service PC. Access to the system was via ISDN (So interface).

The configuration of the interface to the PSTN and the interfaces to the Avaya telephones are outside the scope of this document.
3.1. Configure Interface to Konftel

Launch ISA by selecting Start -> Programs -> Integral -> ISA. To open a connection to the Avaya Communication Server Integral 5 (I5) click: File - Open connection... and enter the necessary parameters to login:

- System: Arbitrary system name,
- Interface: ISDN Card AVM-GmbH,
- Service Call number: 78 (default),
- Service Password: System time backwards.

A standard analogue subscriber must be created on board S4A (analogue ports) with parameters according to Table 3. The result is shown in Figures 2 and 3.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Call number</td>
<td>Enter the call number to be assigned to the subscriber, e.g. 24.</td>
</tr>
<tr>
<td>Name</td>
<td>Enter the name of the user which is to be associated with the telephone, e.g. Konftel.</td>
</tr>
<tr>
<td>Port</td>
<td>Enter the designation for the port interface to which the unit is attached, e.g. Board S4A, Port 2.</td>
</tr>
</tbody>
</table>

Table 3: Configuration - Konftel Subscriber
Figure 2: Subscriber Konftel on S4A
3.2. Configure Supplementary Services and Access to Extended Features

To allow the use of certain features or supplementary services the following settings are to be made:
For anonymous outgoing calls: Enable:
- Subscribers
  - Konftel
  - ISDN features
  - Others
Always suppress [✓] call number being displayed to other party
To allow Call Waiting: Disable
- Subscribers
  - Konftel
    - Basic settings (right-click on Konftel to enter Basic settings)
    - Special settings
      [ ] Second call protection

**Figure 5: Subscriber Konftel - Special settings**
For Call transfer to external telephones: Enable:
- Subscribers
  - Konftel
    - ISDN features
      - Transfer
        - External Transfer
          (●) External transfer by on hook and key

Figure 6: Subscriber Konftel - ISDN features - Transfer
For Call transfer between two external telephones: Enable:
- System
  - Special features
    - Call transfer of two external outgoing connections

Figure 7: System - Special features
From an analogue telephone, supplementary services can be invoked by means of Facility Access Codes (FAC). FACs can be displayed under:

- System
  - Function codes

Examples are:
*66 Invocation Call Completion on Busy Subscriber (Automatic call back)  
*68 Invocation of a Conference  
*71 Activate Call Diversion (Call Forwarding)  
#71 Deactivate Call Diversion  
*79 Restriction of own caller identification

![Figure 8: System - Function codes](image-url)
4. Configuration of the Konftel 300 unit
No special configuration is required.

5. Verification Steps
To verify that the Avaya Communication Server Integral 5 was properly configured, the following steps can be taken:

- After establishing the physical connection from the Konftel 300 to the Avaya Communication Server Integral 5 via an analogue port, check whether the Konftel 300 is able to support basic calls to and from the various other telephones and the PSTN.
- Continue to check the more complex supplementary services such as Call Hold, Call Transfer, Call Forwarding and Conference.

6. Interoperability Compliance Testing

6.1. General Test Approach
Interoperability compliance tests were carried out manually and covered incoming and outgoing Basic Calls and with the public network (ISDN) as well as the following supplementary services: Calling / Connected Line Identification Presentation as part of Basic Call, Call Hold, Call Transfer, Call Forwarding (unconditional, on busy, and on no reply), and Conference.

6.2. Test Results
In general the tests regarding compatibility between the Avaya Communication Server Integral 5 (I5) and the Konftel 300 were successful. Only in the following cases some minor issues were observed:

- For incoming external calls, the “normal” ring associated with an internal call is used.
- Internal anonymous calls are not supported by the I5.
- When putting a call on hold using the "Hold" key of the Konftel 300, no “hold” tone is heard by the held party. The "R" key should be used instead.
- When a call is active between the Konftel 300 and another telephone, if the Konftel 300 puts the call on hold, and the other party hangs up while the call is on hold, the Konftel 300 remains in the “busy” state and the hold lamp continues to blink. The user can clear this by pressing the "hang up" key.
- To retrieve the initial call after a consultation call to a telephone in the public network, the "R" key at the Konftel 300 must be pressed twice. If the telephone in the public network is busy, the "R" key must be pressed several times.
- A three party conference can only be established with an external party. The external party must the added to the conference as the second party.
7. Conclusion

The Konftel 300 conference unit can be attached to the analogue port of an Avaya Communication Server Integral 5 to enable all those present in a room to participate in a telephone conversation. The configuration described in these Application Notes has been successfully compliance tested.

8. Support

Support for Konftel products is available at
- Web-based support:  http://www.konftel.com/
- Email:  info@konftel.com
- International help desk:  +46 90706489
- North American help:  +1 866-606-4728

9. Additional References

Avaya documentation is available at  http://support.avaya.com.
Konftel 300 documentation is available at  http://www.konftel.com.

[1]  Supplementary Service Description for Avaya Communication Server Integral 5
©2008 Avaya Inc. All Rights Reserved.
Avaya and the Avaya Logo are trademarks of Avaya Inc. All trademarks identified by ® and ™ are registered trademarks or trademarks, respectively, of Avaya Inc. All other trademarks are the property of their respective owners. The information provided in these Application Notes is subject to change without notice. The configurations, technical data, and recommendations provided in these Application Notes are believed to be accurate and dependable, but are presented without express or implied warranty. Users are responsible for their application of any products specified in these Application Notes.

Please e-mail any questions or comments pertaining to these Application Notes along with the full title name and filename, located in the lower right corner, directly to the Avaya DevConnect Program at devconnect@avaya.com.