



Using Synthetic Tests

Synthetic tests are tests that you configure to run periodically. They use voice applications as other devices (phones) normally would, and analyze the behavior of the system. IP Communications Operations Manager (Operations Manager) can monitor the information returned from the synthetic tests and generate events based on the results.

The following topics are covered:

- [Getting Started with Synthetic Tests, page 9-1](#)
- [Configuring Synthetic Tests, page 9-2](#)
- [Configuring Applications for Synthetic Tests, page 9-3](#)
- [Maintaining Synthetic Tests, page 9-4](#)
- [Scheduling Synthetic Tests, page 9-17](#)
- [Synthetic Test Notes, page 9-17](#)
- [Synthetic Test Worksheets, page 9-19](#)

Getting Started with Synthetic Tests

Synthetic tests are used to measure the availability of voice applications. Synthetic tests verify whether the voice application can service requests from a user. For example, you can use synthetic tests to verify that phones can register with a Cisco CallManager.

Synthetic tests use synthetic phones to measure the availability of voice applications by emulating your actions. For example, a synthetic test places a call between clusters and then checks to see if the call is successful.

If a synthetic test fails, Operations Manager generates a critical event. Such events are displayed in the Alerts and Events display (see [Using the Alerts and Events Display, page 3-1](#)).

Operations Manager supports synthetic testing for the following applications:

- Cisco CallManager and Cisco CallManager Express
- Cisco TFTP Server
- Cisco Emergency Responder
- Cisco Conference Connection
- Cisco Unity and Cisco Unity Express

Table 9-1 lists the synthetic tests and the results that each test must produce to pass.

**Note**

The phones in all synthetic tests, except for Phone Registration, remain registered unless there is a failure.

Table 9-1 Synthetic Test Descriptions and Expected Results

Synthetic Test	Description	Expected Results
Phone Registration Test	Opens a connection with the Cisco CallManager and registers a simulated IP phone.	Successful registration of the phone.
Dial-Tone Test	Simulates an off-hook state to the Cisco CallManager and checks for receipt of a dial tone.	Receives a dial tone signal from the Cisco CallManager.
End-to-End Call Test	Initiates a call to a second simulated or real IP phone.	<ul style="list-style-type: none"> Registers, goes off-hook, and places the call Ring indication Destination phone goes off-hook to accept the call <p>Note If <i>call progress tones</i> and <i>announcements</i> are configured on the gateway for your end-to-end call, the test may succeed even before the phone rings or after a couple of rings. This indicates that your gateway is working correctly.</p>
TFTP Download Test	Performs a TFTP get-file operation on the TFTP server.	Successful download of a configuration file from the TFTP server.
Emergency Call Test	Initiates a call to the emergency number to test the dynamic routing of emergency calls.	<ul style="list-style-type: none"> All calls initiated Ring indication on Public Safety Answering Point (PSAP) and On Site Alert Number (OSAN), if configured.
Cisco Conference Connection Test	Creates a conference (meeting) in the Conference Center and connects to the meeting.	<ul style="list-style-type: none"> Conference created with the specified meeting ID Call initiated First person and second person (if configured) successfully connect to the conference
Message-Waiting Indicator Test	Calls the target phone and leaves a voice message in the voice mailbox.	Activation of the phone's message-waiting indicator. The message is then deleted and the message-waiting indicator is deactivated.

Configuring Synthetic Tests

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- Step 1** Configure the phones that you will use to run synthetic tests, following the recommendations in [Configuring Applications for Synthetic Tests, page 9-3](#).
- Step 2** Configure the synthetic tests, following the instructions in [Creating Synthetic Tests, page 9-5](#).
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Configuring Applications for Synthetic Tests

You can configure synthetic tests for each Cisco CallManager and Cisco voice application in your network. For each synthetic test, you must configure one or more phones in the related Cisco CallManager or Cisco voice application.


Caution

Only Cisco 7960 IP Phones are supported for synthetic tests.

When configuring phones:

- Create one phone extension number and one MAC address for each test and use it for that test *only*.
- Make sure that the combination of the phone extension number and the MAC address used in a test is unique across the voice cluster.


Caution

Failure to follow these recommendations may result in synthetic test failures.

Before you configure phones, work through [Determining How Many Phones You Need](#), page 9-3 to estimate how many phones you will need based on the tests you want to run.

As you configure phones on each Cisco CallManager, use the worksheet in [Synthetic Test Worksheets](#), page 9-19 to simplify data entry into Operations Manager.

Determining How Many Phones You Need

The number of phones you must create in a Cisco CallManager for use in synthetic tests depends on:

- The number of synthetic tests you want to configure
- The type of tests you want to run

[Table 9-2](#) provides a worksheet for determining how many phones you need.

Table 9-2 **Number of Phones Required for Synthetic Tests**

Number of Tests	Type of Test	Phones Needed for Test	Total Phones Needed
	Phone Registration	1 (synthetic phone)	
	Dial-Tone	1 (synthetic phone)	
	End-to-End Call with real phones	2 (1 synthetic phone and 1 real phone)	
	End-to-End Call with synthetic phones	2 (synthetic phones)	
	TFTP Download	0	
	Emergency Call (without On Site Alert Number)	2 (synthetic phones)	
	Emergency Call (with On Site Alert Number)	3 (synthetic phones)	
	Cisco Conference Connection	2 (synthetic phones)	
	Message-Waiting Indicator	2 (synthetic phones)	

Configuring Phones

When you configure phones in a Cisco CallManager, you must consider the requirements listed in [Meeting the Requirements for Target Phones, page 9-4](#) and record the phone information as you enter it. A sample worksheet is provided in [Synthetic Test Worksheets, page 9-19](#).

Meeting the Requirements for Target Phones

For the following synthetic tests, there are special requirements for the target phones:

- **Message-Waiting Indicator Test**—When creating the subscriber on Cisco Unity that you are going to use for synthetic testing, configure the subscriber according to the following:
 - The Set subscriber for self-enrollment at next login check box must be deselected, or you must use a real phone to dial into the Cisco Unity device and complete the personalization process.
 - Set the password option to Password never expires.
- **Emergency Call Test**—The outgoing PSAP must use a local phone (not 911). Also, for the OSAN, use a synthetic phone only (do not use your local onsite security phone).
- **Cisco Conference Connection Test**—For Cisco CallManager Release 4.0, when you are configuring a route pattern in Cisco CallManager to connect to Cisco Conference Connection, you must select the Allow overlap sending option.

Recording Phone Extension Numbers on a Worksheet

As you configure phones, record them on a worksheet similar to those in [Table 9-10](#) through [Table 9-13](#). Use the worksheet that is appropriate for the synthetic test you are configuring.



Note

Do not use phone extension numbers that consist of more than twelve digits.

Use a copy of the worksheets to record:

- **Cisco CallManager**—You can obtain a list of Cisco CallManagers from the Create Synthetic Test page. For instructions on opening the Create Synthetic Test page, see [Maintaining Synthetic Tests, page 9-4](#).
- **Phone extension numbers and MAC addresses**—Record the phone extension numbers and MAC addresses you plan to use.
- **Passwords and usernames**—Record the passwords and usernames you plan to use.

Maintaining Synthetic Tests

The Synthetic Tests page lists any synthetic tests that have been set up. To open the Synthetic Tests page, select **Diagnostics > Synthetic Tests**.

These topics explain how to use the Synthetic Tests page:

- [Creating Synthetic Tests, page 9-5](#)
- [Importing Synthetic Tests, page 9-11](#)
- [Editing Synthetic Tests, page 9-16](#)

- [Viewing Synthetic Test Details, page 9-16](#)
- [Deleting Synthetic Tests, page 9-17](#)

Figure 9-1 shows an example of the Synthetic Tests page.

Figure 9-1 Synthetic Tests Page

Synthetic Tests					
					Showing 3 records
	Test Name	Test Type	Voice Application	Other Details	Status
1.	<input type="checkbox"/> reg test skate	Phone Registration Test	1-skate-7845h.cisco.com		Started
2.	<input type="checkbox"/> first	End-to-End Call Test	katmai-cm1.cisco.com	45678	Started
3.	<input type="checkbox"/> skate dial tone test	Dial-Tone Test	1-skate-7845h.cisco.com		Started

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Heading	Description
Test Name	The name provided by the user.
Test Type	The type of synthetic test that is configured.
Voice Application	The IP address of the server where the application is located.
Status	Test status.
Other Details	Any notes.

Creating Synthetic Tests

Before creating synthetic tests, you must configure phones, following the recommendations in [Configuring Applications for Synthetic Tests, page 9-3](#). When you create synthetic tests, use the worksheet recommended in [Configuring Phones, page 9-4](#) to assist you in entering the correct data.



Note

Do not create more than 100 end-to-end call tests that run at one-minute intervals. Configure additional end-to-end call tests to run at various intervals other than one minute.

The following sections describe the steps for creating synthetic tests:

- [Creating Phone Registration or Dial-Tone Synthetic Tests, page 9-6](#)
- [Creating an End-to-End Call Synthetic Test, page 9-6](#)
- [Creating a TFTP Download Synthetic Test, page 9-7](#)
- [Creating a Cisco Conference Connection Synthetic Test, page 9-8](#)
- [Creating an Emergency Call Synthetic Test, page 9-9](#)

- [Creating a Message-Waiting Indicator Synthetic Test, page 9-10](#)

Creating Phone Registration or Dial-Tone Synthetic Tests

You can only configure one Phone Registration test and dial-tone test per Cisco CallManager.

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- Step 1** Select **Diagnostics > Synthetic Tests**. The Synthetic Tests page appears.
 - Step 2** Click **Create**. The Create Synthetic Test page appears.
 - Step 3** From the group selector in the left pane, select the Cisco CallManager system for which you want to set up the test.
 - Step 4** From the Test Type pull-down menu, select either **Phone Registration Test** or **Dial-Tone Test**.
 - Step 5** Enter the name or IP address of the Cisco CallManager or Cisco CallManager Express system.
 - Step 6** Enter the synthetic phone's MAC address.



Note The MAC address for synthetic phones must be between 00059a3b7700 and 00059a3b8aff.

- Step 7** In the Run pane configure when the test should run.
 - If you want the test to run immediately, select the **now** radio button.
 - If you want to schedule the test to run at certain intervals, do the following:
 - Select the **every** radio button
 - Choose how often you want the test to run
 - Enter the times between which you want the test to run
 - Select the days on which the test should run
 - Enter a test name
 - Step 8** Click **Create**.
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Creating an End-to-End Call Synthetic Test

You have the option of configuring the target phone as a real phone or a synthetic phone. The default setting is a synthetic phone.

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- Step 1** Select **Diagnostics > Synthetic Tests**. The Synthetic Tests page appears.
 - Step 2** Click **Create**. The Create Synthetic Test page appears.
 - Step 3** From the group selector in the left pane, select the Cisco CallManager system for which you want to set up the test.
 - Step 4** From the Test Type pull-down menu, select **End-to-End Call Test**.
 - Step 5** In the Caller pane, enter the following:
 - The Cisco CallManager system
 - The MAC address of the phone
 - Step 6** In the Recipient pane, select either the Synthetic Phone or Real Phone radio button.

- If you selected Synthetic Phone, enter the following:
 - The name or IP address of the Cisco CallManager system
 - The phone's MAC address
 - The phone's extension number



Note The MAC address for synthetic phones must be between 00059a3b7700 and 00059a3b8aff.



Note The Other Parameters area is grayed out when Synthetic Phone is selected.

- If you selected Real Phone, do the following:
 - Enter the phone's extension number
 - (Optional) Under Parameters, select **Wait for Answer** or **Enable RTP transmission**.

Step 7 In the Run pane configure when the test should run.

- If you want the test to run immediately, select the **now** radio button.
- If you want to schedule the test to run at certain intervals, do the following:
 - Select the **every** radio button
 - Choose how often you want the test to run
 - Enter the times between which you want the test to run
 - Select the days on which the test should run
 - Enter a test name



Note Create no more than 100 end-to-end call tests that run at a 1-minute interval. Configure any additional end-to-end call tests to run at various intervals greater than 1 minute.

Step 8 Click **Create**.

Creating a TFTP Download Synthetic Test

You can configure only one TFTP download test for each Cisco CallManager.

- Step 1** Select **Diagnostics > Synthetic Tests**. The Synthetic Tests page appears.
- Step 2** Click **Create**. The Create Synthetic Test page appears.
- Step 3** From the group selector in the left pane, select the Cisco CallManager system for which you want to set up the test.
- Step 4** From the Test Type pull-down menu, select **TFTP Download Test**.
- Step 5** Verify that the correct Cisco CallManager system is displayed.
- Step 6** In the Run pane configure when the test should run.

- If you want the test to run immediately, select the **now** radio button.
- If you want to schedule the test to run at certain intervals, do the following:
 - Select the **every** radio button
 - Choose how often you want the test to run
 - Enter the times between which you want the test to run
 - Select the days on which the test should run
 - Enter a test name

Step 7 Click **Create**.

Creating a Cisco Conference Connection Synthetic Test

You can configure only one Cisco Conference Connection test for each Cisco Conference Connection Server.

- Step 1** Select **Diagnostics > Synthetic Tests**. The Synthetic Tests page appears.
- Step 2** Click **Create**. The Create Synthetic Test page appears.
- Step 3** From the group selector in the left pane, select the Cisco Conference Connection system for which you want to set up the test.
- Step 4** From the Test Type pull-down menu, select **Cisco Conference Connection Test**.
- Step 5** In the CCC Parameters pane, enter the following:
- Cisco Conference Connection server name or IP address
 - Username
 - Password
 - Meeting ID
 - Access Number (route pattern between Cisco CallManager and the Cisco Conference Connection server)
- Step 6** In the First Caller pane, enter the following:
- a. The Cisco CallManager where Cisco Conference Connection is configured.
 - b. The phone's MAC address. Use the format 00-05-9a-3b-77-00 or 00059a3b7700.



Note The MAC address for synthetic phones must be between 00059a3b7700 and 00059a3b8aff.



Note Operations Manager verifies only that the MAC address number entered in the Create Synthetic Test page is syntactically valid. It is your responsibility to make sure the correct numbers are entered, as configured in the Cisco CallManager.

- Step 7** In the Second Caller pane, enter the following:
- a. The name or IP address of the Cisco CallManager where Cisco Conference Connection is configured.
 - b. The phone's MAC address. Use the format 00-05-9a-3b-77-00 or 00059a3b7700.
- Step 8** In the Run pane configure when the test should run.
- If you want the test to run immediately, select the **now** radio button.
 - If you want to schedule the test to run at certain intervals, do the following:
 - Select the **every** radio button
 - Choose how often you want the test to run
 - Enter the times between which you want the test to run
 - Select the days on which the test should run
 - Enter a test name
- Step 9** Click **Create**.
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Creating an Emergency Call Synthetic Test

The Emergency Call synthetic test is supported only on Cisco Emergency Responder Release 1.2.

- Step 1** Select **Diagnostics > Synthetic Tests**. The Synthetic Tests page appears.
- Step 2** Click **Create**. The Create Synthetic Test page appears.
- Step 3** From the group selector in the left pane, select the Cisco Emergency Responder system for which you want to set up the test.
- Step 4** From the Test Type pull-down menu, select **Emergency Call Test**.
- Step 5** In the CER Parameters pane, enter the following:
- The name or IP address of the system where Cisco Emergency Responder is installed
 - Emergency phone number
- Step 6** In the Caller pane, enter the following:
- The name or IP address of the Cisco CallManager for the caller's phone
 - The phone's MAC address



Note The MAC address for synthetic phones must be between 00059a3b7700 and 00059a3b8aff.



Note Operations Manager verifies only that the MAC address number entered in the Create Synthetic Test page is syntactically valid. It is your responsibility to make sure the correct numbers are entered, as configured in the Cisco CallManager.

- Step 7** In the PSAP pane, enter the following:
- The Public Safety Answering Point (PSAP) Cisco CallManager
 - The PSAP phone's MAC address
- Step 8** (Optional) If there is an On Site Alert Number (OSAN), select the On Site Alert Number check box, and enter the following in the OSAN pane:
- The name or IP address of the OSAN Cisco CallManager
 - The OSAN phone's MAC address.
- Step 9** In the Run pane configure when the test should run.
- If you want the test to run immediately, select the **now** radio button.
 - If you want to schedule the test to run at certain intervals, do the following:
 - Select the **every** radio button
 - Choose how often you want the test to run
 - Enter the times between which you want the test to run
 - Select the days on which the test should run
 - Enter a test name
- Step 10** Click **Create**.
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Creating a Message-Waiting Indicator Synthetic Test

- Step 1** Select **Diagnostics > Synthetic Tests**. The Synthetic Tests page appears.
- Step 2** Click **Create**. The Create Synthetic Test page appears.
- Step 3** From the group selector in the left pane, select the Cisco Unity or Cisco Unity Express system for which you want to set up the test.
- Step 4** From the Test Type pull-down menu, select **Message-Waiting Indicator Test**.
- Step 5** In the Cisco Unity field enter the name or IP address of the Cisco Unity or Cisco Unity Express system.
- Step 6** In the Caller pane, enter the following:

- The name or IP address of the Cisco CallManager for the caller's phone
- The phone's MAC address



Note The MAC address for synthetic phones must be between 00059a3b7700 and 00059a3b8aff.



Note Operations Manager verifies only that the MAC address number entered in the Create Synthetic Test page is syntactically valid. It is your responsibility to make sure the correct numbers are entered, as configured in the Cisco CallManager.

- Step 7** In the Recipient pane, enter the following:
- The name or IP address of the recipient Cisco CallManager
 - The phone's MAC address

- The phone's extension number
- The voice mail password

Step 8 In the Run pane configure when the test should run.

- If you want the test to run immediately, select the **now** radio button.
- If you want to schedule the test to run at certain intervals, do the following:
 - Select the **every** radio button
 - Choose how often you want the test to run
 - Enter the times between which you want the test to run
 - Select the days on which the test should run
 - Enter a test name

Step 9 Click **Create**.



Tip

After you perform a Cisco CallManager version upgrade, Cisco Unity synthetic tests that use the Cisco CallManager you upgraded might stop working. If this problem occurs, you should delete the Cisco Unity synthetic test, and then add the synthetic test again.

Importing Synthetic Tests

You can import multiple synthetic tests at one time by using a comma separated values (CSV) file.

Before You Begin

- Verify that your seed file is formatted correctly. For details, see [Formatting Synthetic Test Import Files, page 9-11](#).
- Place the seed file on the server, in the `NMSROOT\ImportFiles` directory. If you do not have access to the directory, contact a local administrator for the server where Operations Manager is installed.



Note

NMSROOT is the directory where Operations Manager is installed on your system. If you selected the default directory during installation, it is `C:\Program Files\CSCOpX`.

Step 1 Select **Diagnostics > Synthetic Tests**. The Synthetic Tests page appears.

Step 2 Click **Import**. The Import Synthetic Test page appears.

Step 3 Enter the name of the seed file in the Filename field and click **OK**.

Formatting Synthetic Test Import Files

You can find an example of an import file in the `<NMSROOT>\Importfiles` folder.

**Note**

NMSROOT is the directory where Operations Manager is installed on your system. If you selected the default directory during installation, it is C:\Program Files\CSCOpX.

The general format for a synthetic test seed file is as follows:

- If you create the import file manually, the import file header should be:

```
Cisco Systems synthetic test import, version=2.0;type=CSV;source=manual
```
- All values must be separated with a vertical bar (|).

The schedule column must use the following formatting:

MONTH,DAYSOFMONTH,DAYSOFWEEK,HOUR,MINUTE

- Month—0-11
- Day of month—1-31
- Day of week—0-6 (0 = sunday)
- Hour—0-23
- Minute—0-59

Each specifier can be a number, a range, comma separated numbers and a range, or an asterisk.

Month and days of the month fields cannot be changed. You should enter an asterisk (*).

Day of week can have an asterisk to represent all days, or it can have a comma separated list of days. For Hour, you can enter an asterisk to represent 24 hours, or you can enter a range. Minute can be an asterisk, to represent all, or it can be a range.

Only the following schedule types are supported:

- *;*;*;*;* —All days, 24 hours
- *;*;2-4;*;* —Tuesday to Thursday, 24 hours
- *;*;*;8-20;* —All days between 8:00 a.m. and 8:00 p.m.
- *;*;*;8;20-59;*;*;*;9-19;*;*;*;20;0-40 —All days between 8:20 a.m. and 8:40 p.m.

Phone Registration and Dial-Tone Tests

Phone Registration test format:

REGISTRATION|TestName|PollInterval|Schedule|CCMAddress|MACAddress

Dial-tone test format:

OFFHOOK|TestName|PollInterval|Schedule|CCMAddress|MACAddress

Table 9-3 Import File Format for Phone Registration and Dial-Tone Tests

Column Number	Description
1	Type of test: <ul style="list-style-type: none"> • Phone Registration—REGISTRATION • Dial-tone—DIALTONE
2	Test name.
3	Polling interval.
4	Schedule.

Table 9-3 Import File Format for Phone Registration and Dial-Tone Tests (continued)

Column Number	Description
5	Cisco CallManager to which the phone is connected.
6	Phone's MAC address.

Example of a Phone Registration test import file:

```
REGISTRATION|reg test|60|*;*;*;*|ipif-skate.cisco.com|00059A3B7780
```

Example of a dial-tone test import file:

```
OFFHOOK|dial-tone|60|*;*;*;*|ipif-skate.cisco.com|00059A3B7781
```

End-to-End Call Test

End-to-End Call test format:

```
ENDTOENDTEST|TestName|PollInterval|Schedule|SrcCCM|SrcMAC|IsDestRealPhone|DestCCM|DestMAC|Extn|WaitForAnswer|EnableRTP
```

Table 9-4 File Format for End-to-End Call Test

Column Number	Description
1	Type of test—ENDTOENDTEST
2	Test name.
3	Polling interval.
4	Schedule.
5	Caller Cisco CallManager.
6	Caller MAC address.
7	Whether or not the recipient phone is a real phone. Enter true or false.
8	Recipient Cisco CallManager.
9	Recipient MAC address.
10	Recipient extension number.
11	Wait for answer. Enter true or false.
12	Enable RTP transmission. Enter true or false.

Example of an End-to-End test import file:

```
ENDTOENDTEST|endtoend test|60|*;*;*;*|ipif-skate.cisco.com|00059A3B7782|FALSE|ipif-skate.cisco.com|00059A3B7783|4002|TRUE|FALSE
```

TFTP Download Test

TFTP test format: TFTP|TestName|PollInterval|Schedule|CCMAddress

Table 9-5 Import File Format for TFTP Download Test

Column Number	Description
1	Type of test—TFTP.
2	Test name.
3	Polling interval.
4	Schedule.
5	Cisco CallManager.

Example of a TFTP download test import file:

```
TFTP|tftp download|60|*;*;*;*|ipif-skate.cisco.com
```

Message-Waiting Indicator Test

End-to-End Call test format:

```
MWITEST|TestName|PollInterval|Schedule|UnityAddress|SrcCCM|SrcMAC|DestCCM|DestMAC|ExtN  
|Password
```

Table 9-6 Import File Format for Message-Waiting Indicator Test

Column Number	Description
1	Type of test—MWITEST.
2	Test name.
3	Polling interval.
4	Schedule.
5	Cisco Unity system.
6	Caller Cisco CallManager.
7	Caller MAC address.
8	Recipient Cisco CallManager.
9	Recipient MAC address.
10	Recipient extension number.
11	Recipient voice mail password.

Example of a Message-waiting indicator test import file:

```
MWITEST|mwi test|300|*;*;*;*|10.76.91.155|10.76.91.148|00059A3B7B00|10.76.91.148  
|00059A3B7B01|71418001|13579
```

Cisco Conference Connection Test

Cisco Conference Connection Test format:

```
CCCTEST|TestName|PollInterval|Schedule|CCCAddress|FirstCCM|FirstMAC|SecondCCM|SecondM  
AC|CCCUUserName|CCCPassWord|MeetingID|CCCAccessNum|CCCTargetE164
```

Table 9-7 Import File Format for Cisco Conference Connection Test

Column Number	Description
1	Type of test—CCCTEST.
2	Test name.
3	Polling interval.
4	Schedule.
5	Cisco Conference Connection system.
6	First caller Cisco CallManager.
7	First caller MAC address.
8	Second caller Cisco CallManager.
9	Second caller MAC address.
10	Cisco Conference Connection username.
11	Cisco Conference Connection password.
12	Meeting ID number.
13	Cisco Conference Connection access number.

Example of a Cisco Conference Connection test import file:

```
CCCTEST|conference conn test|120|*;*;*;*|10.76.91.105|10.76.91.99|00059A3B7F00
|10.76.91.99|00059A3B7F01|ccjctapi|cisco|444444|123444444|1234
```

Emergency Call Test

Emergency Call Test format:

```
EMERGENCYCALLTEST|TestName|PollInterval|Schedule|CERAddress|SrcCCM|SrcMAC|PsapCCM
|PsapMAC|EmergencyNumber|enableOsan|OsanCCM|OsanMAC
```

Table 9-8 Import File Format for Emergency Call Test

Column Number	Description
1	Type of test—CCCTEST.
2	Test name.
3	Polling interval.
4	Schedule.
5	Cisco Emergency Responder system.
6	Caller Cisco CallManager.
7	Caller MAC address.
8	Public Safety Answering Point (PSAP) Cisco CallManager
9	PSAP MAC address.
10	Emergency number.
11	Enable On Site Alert Number (OSAN). Enter true or false.

Table 9-8 Import File Format for Emergency Call Test (continued)

Column Number	Description
12	OSAN Cisco CallManager.
13	OSAN MAC address.

Example of an Emergency Call test import file:

```
EMERGENCYCALLTEST|emergency call test|300|*;*;*;*|10.76.35.211|10.76.93.75|00059A3B7789
|10.76.93.75|00059A3B7790|911|TRUE|10.76.38.111|00059A3B7791
```

Editing Synthetic Tests



Note

Every time you create or edit a test that requires a phone extension number and a MAC address, you should edit them as a pair. Do not edit one independently of the other.

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- Step 1** Select **Diagnostics > Synthetic Tests**. The Synthetic Tests page appears.
 - Step 2** Select the synthetic test you want to edit.
 - Step 3** Click **Edit**. The Edit Synthetic Test page appears.
 - Step 4** Enter or change the desired information.
 - Step 5** Click **Edit**. Your changes will be saved.
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Viewing Synthetic Test Details

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- Step 1** Select **Diagnostics > Synthetic Tests**. The Synthetic Tests page appears.
 - Step 2** Select the synthetic test.
 - Step 3** Click **View**. The Synthetic Test Details page appears. The details displayed vary depending on the type of test.
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Deleting Synthetic Tests

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- Step 1** Select **Diagnostics > Synthetic Tests**. The Synthetic Tests page appears.
 - Step 2** Select the synthetic test you want to delete.
 - Step 3** Click **Delete**.
 - Step 4** Click **Yes** in the confirmation box.



Note If you click **Cancel** before clicking **OK**, the synthetic tests will not be deleted.

Scheduling Synthetic Tests

When you create a synthetic test, you have the option of running the test now, or scheduling the test to run at regular intervals.

If you want to change the time at which the test should run, you must edit the synthetic test in the Edit Synthetic Test page.



Note Your login determines whether or not you can perform this task. For information on user security, see [Understanding Your User Role, page 1-20](#).

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- Step 1** Select **Diagnostics > Synthetic Tests**. The Synthetic Tests page appears.
 - Step 2** Select the synthetic test you want to edit.
 - Step 3** Click **Edit**. The Edit Synthetic Test page appears.
 - Step 4** In the Run area, enter or change the desired schedule information.
 - Step 5** Click **Edit**. Your changes will be saved.
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Synthetic Test Notes

[Table 9-9](#) contains information you should be aware of when working with synthetic tests.

Table 9-9 Synthetic Test Notes

Summary	Explanation
<p>Synthetic tests do not run for 30 minutes after the Operations Manager processes are started. However, during this time, you can still create, edit, or delete tests.</p>	<p>Starting Operations Manager processes places a high load on the system. To prevent synthetic tests from failing during this time, Operations Manager delays starting them.</p> <p>You can change the default setting by doing the following:</p> <ol style="list-style-type: none"> 1. Add the following default settings in the AMAServer.properties file located in <NMSRoot>\etc\cws\si: AMAMonitor.InitialDelay-30 2. Stop and restart the synthetic transaction server using the following commands: <code>pdterm STServer</code> <code>pdexec STServer</code> 3. Start the VHMSTIntegrator process using the <code>pdexec VHMSTIntegrator</code> command.
<p>When the interval of a synthetic test is decreased from a high value to a low value, the first results for the new value may take longer than the new interval to report.</p>	<p>Each synthetic test executes at a time that is controlled by its interval setting. Immediately after you decrease the interval setting for a synthetic test, that transaction might not execute again until a total elapsed time that is longer than the new interval. For example, if you decrease an interval from 180 seconds to 60 seconds, the first results for the new interval may take as long as 240 seconds to report.</p>
<p>One-time synthetic test failures sometimes occur.</p>	<p>Occasionally, one-time synthetic test failures occur. Such failures can be due to high loads on the Operations Manager system or other factors that cause Operations Manager to be unable to receive some events from applications.</p> <p>To determine whether these events are occurring occasionally or continually, you should regularly monitor for the TooManyFailedsyntheticTests event.</p>
<p>Multiple conferences with the same meeting ID are created and are not deleted, slowing the performance of Cisco Conference Connection database operations.</p>	<p>When synthetic tests for Cisco Conference Connection (CCC) fail, the conferences they create might not be deleted from the CCC Past Conferences database.</p> <p>If a synthetic test fails after a conference is created but before it is stopped and deleted, the next occurrence of the test results in the termination of the conference, but the conference is not deleted.</p> <p>You should periodically delete any old conferences used for synthetic testing. Delete the old conferences through the CCC user interface.</p>
<p>Cisco Unity Message-waiting indicator synthetic tests may fail.</p>	<p>If a Cisco Unity synthetic test fails and the Message-Waiting Indicator light is on, you must configure a real phone with the same extension number used in the test and delete the voice mails manually. Alternatively, you can use the Message Store Manager tool to remove the voice mails. Once this is completed, the test will pass.</p>

Synthetic Test Worksheets

Recording Cisco CallManager Information

Table 9-10 Cisco CallManager Worksheet for Synthetic Test Configuration

Cisco CallManager:			
Synthetic Test	MAC Address	Destination Phone Extension Number	Destination Phone Cisco CallManager
Phone Registration		—	—
Dial-Tone		—	—
End-to-End Call—source phone		—	—
End-to-End Call—destination phone (synthetic phone)			
End-to-End Call—destination phone (real phone)	—		—
Phone Registration		—	—
Dial-Tone		—	—
End-to-End Call—source phone		—	—
End-to-End Call—destination phone (synthetic phone)			
End-to-End Call—destination phone (real phone)	—		—
Phone Registration		—	—
Dial-Tone		—	—
End-to-End Call—source phone		—	—
End-to-End Call—destination phone (synthetic phone)			
End-to-End Call—destination phone (real phone)	—		—

Recording Cisco Emergency Responder Information

Table 9-11 Cisco Emergency Responder Worksheet for Synthetic Test Configuration

Parameter	Name or Number
Source	
Cisco CallManager	
MAC address	
Destination	
Emergency number	
Public Safety Answering Point	
Cisco CallManager	

Table 9-11 Cisco Emergency Responder Worksheet for Synthetic Test Configuration (continued)

Parameter	Name or Number
Source	
Cisco CallManager	
MAC address	
On Site Alert	
Cisco CallManager	
MAC address	

Recording Cisco IP Conference Connection Information

The username, password, and access number are required for the Cisco Conference Connection Test.

Table 9-12 Cisco IP Conference Connection Worksheet for Synthetic Test Configuration

Parameter	Name or Number
Cisco Conference Connection	
Username	
Password	
Meeting ID	
Access number	
First Caller	
Cisco CallManager	
MAC address	
Second Caller	
Cisco CallManager	
MAC address	

Recording Cisco Unity Information**Table 9-13** Cisco Unity Worksheet for Synthetic Test Configuration

Parameter	Name or Number
Caller	
Cisco CallManager	
MAC address	
Recipient	
Cisco CallManager	
MAC address	
Phone extension number	
Voice Mail	
Password	