

## Cisco CallManager Express B-ACD Basic Reports

Thanks for downloading this copy of basic reports for Cisco CallManager Express (CME). These reports, created by Sentinel Technologies, are free for you to use as you wish within your company. The reports work with the Basic Automatic Call Distribution (B-ACD) and Auto Attendant answer (AA) features in CME. The report uses Microsoft Excel macros as an engine to produce the reports. While they were developed with Excel 2003, they are intended to work with Excel 97 or later.

The enclosed spreadsheet, CMEReports.xls, produces four reports: Daily Summary, Hourly Summary, Agent Summary and Agent Activity.

### First, a word from our sponsor ...

Sentinel Technologies works a lot with Cisco telephony products. We can provide more advanced CME reporting solutions as well as assistance in all phases of configuring and using CME. You can contact Sentinel at 800.769.4343 (or 630.769.4343) or at [www.sentinel.com/poweredbysentinel](http://www.sentinel.com/poweredbysentinel) or just click on the “powered by sentinel” logo on the spreadsheet.

### Getting started ...

The compressed download file includes an Excel spreadsheet, a file of sample input data, this readme file and a sample batch file for assembling the data. For starters, try running the Excel spreadsheet. You will need to enable macros – after all, that’s how these reports work. If prompted, you can disable automatic query refresh as the input data will not be changing.

Excel will not run macros if your security level is set too high. The way to change this is with the Tools > Macro > Security ... function in Excel. Choosing “Medium” security should work. You may find that your organization does not allow you to change this setting yourself. If that’s the case, please contact your internal support organization for assistance.

Once you have the spreadsheet running, try loading the test data file supplied in the download. Press the Load Base Data button and browse to the input data file. Select it, and you should see the spreadsheet populated with data. Try the other buttons to create new reports based on the data imported. With each button, another tab will appear with the report data. You can print these reports out this like you would any spreadsheet. You can also use the base data to produce additional reports.

### Getting input data from your Cisco router ...

Your Cisco CME router sends ACD statistics in “comma separated value” (csv) format to a TFTP server. For the reports in this spreadsheet, you need exactly one day’s ACD data in the file Excel will import. There are a variety of ways to setup a TFTP server to do this. This readme outlines one way using a computer running Windows 2000 and a shareware TFTP application. The data gathering will also work on other versions of Windows, Linux or on other operating systems.

The Cisco router will output one file each hour, on the hour, or less often if you prefer. This is controlled in the router configuration file. Here’s an excerpt from a config file from a Cisco 2851 running IOS 12.3(11)XL and B-ACD 2.0.0.0:

```
hunt-group report url prefix tftp://10.1.1.15/CMEData/data
hunt-group report url suffix 0 to 23
hunt-group report every 1 hours
```

Of course, the IP address and destination directory of the TFTP server will be different.

The router outputs csv data to a TFTP (trivial file transfer protocol) server. One shareware TFTP application available written by Philippe Jounin is at [tftpd32.jounin.net](http://tftpd32.jounin.net).

When the TFTP server is running, each hour a file should appear on the machine where the server program is running. In the above example, the files would be named

```
C:\CMEData\data000.csv
```

through

```
C:\CMEData\data023.csv
```

As the data for each hour is sent two hours later, one day's data is complete at 2:00 am the following day.

### Assembling the input data ...

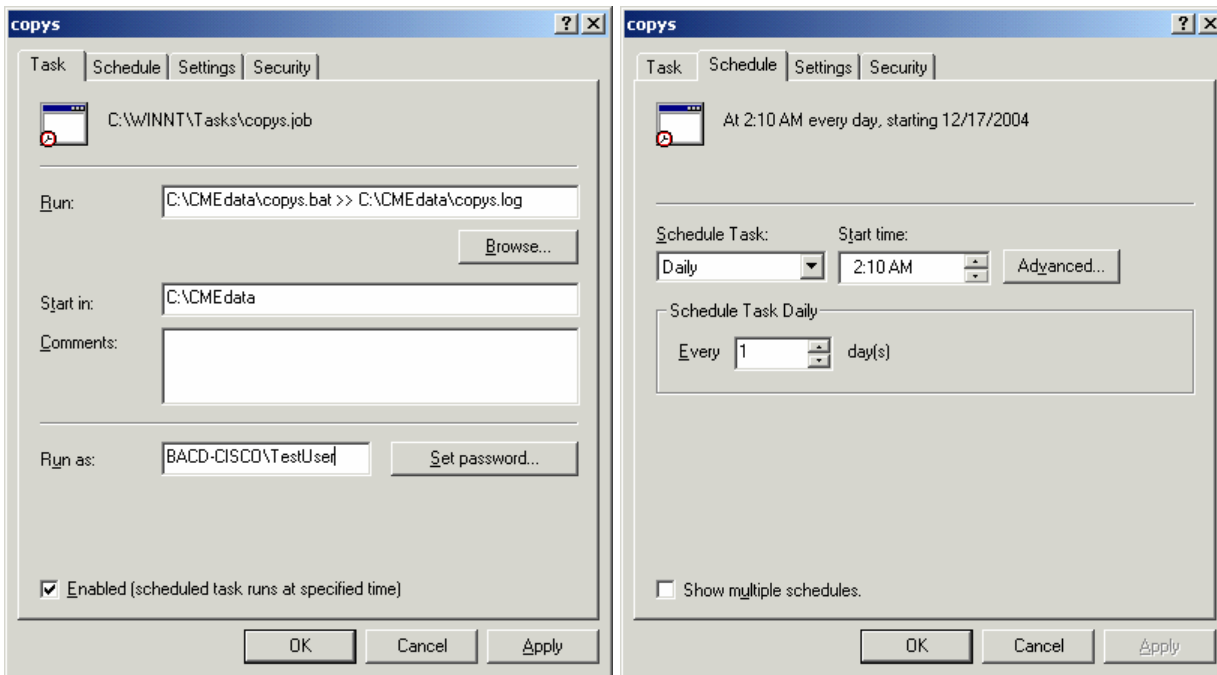
Between 2 am and 3 am we need to assemble the 24 ACD files for the previous day into one. To do this, we use Windows' Scheduled Tasks function to run a batch job each day. Each day at 2:10 am this program combines (concatenates) the 24 data files into one output csv file named with the day it was created, in YYYYMMDD format, for example

```
C:\CMEData\050119.csv
```

for the data from January 18, 2005 (remember the file is created a couple of hours into the next day).

Since Windows doesn't have a built-in way to name files with the date, in this example we use a freely available program called Fdate, from Stephen Ferg at [www.ferg.org/fdate](http://www.ferg.org/fdate).

Here are the scheduling details:



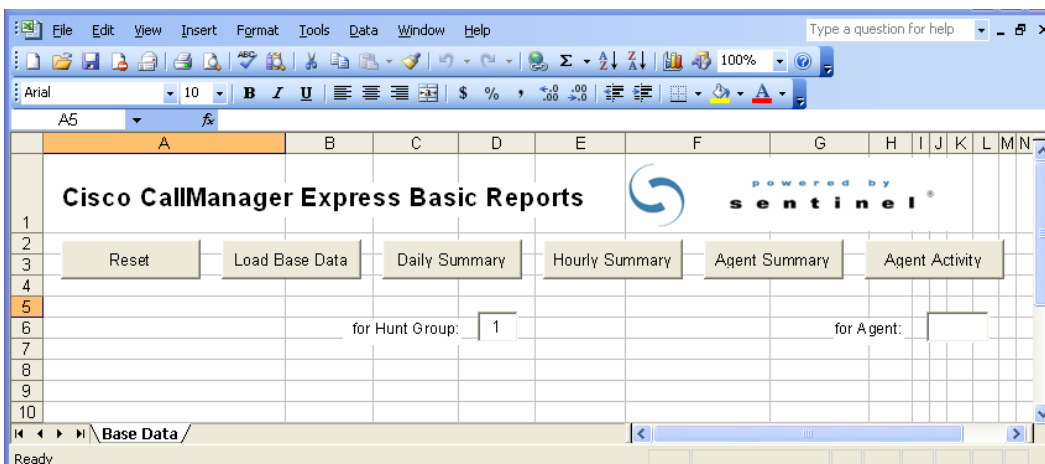
The enclosed batch file copys.bat sets a date %date1% using fdate, and combines the files:

```
for /f "tokens=*" %%v in ('FDATE /Ff /Oyymmdd') do set date1=%%v  
COPY C:\CMEdata\data*.csv C:\CMEdata\%date1%.csv
```

A log file, copys.log, is also created, but that's optional.

### Generating reports with Excel ...

The enclosed spreadsheet, CMEReports, starts with this blank worksheet:



The first step is to use the Load Base Data button to load a daily .csv file. It loads into a sheet named "base data". From this point the four reports can be run. Each report is for one hunt group at a time, as selected on the base data sheet. The Agent Activity report is for the selected agent.

Each report appears as a separate sheet, from where it can be printed. The reset button clears the base data.

Additionally, each report is prepared for a single hunt group, selected by the "for Hunt Group" field. In the example above reports will be generated for hunt group 1. If the hunt group is changed, the reports for the new hunt group need to be generated by clicking the appropriate buttons. In addition, the Agent Activity report is created for a specific agent. It is necessary to enter the appropriate agent number in the "for Agent" field. The sample data has information for agents 2001 through 2004.

In each report, where times are presented, they are in minutes and fractions of a minute.

To print reports for a different time period, new data must be loaded using the Load Base Data button. This will clear out the existing data.