

# Sapphire - SMS Plug in Case Study

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## Sapphire – SMS Plug in User Manual

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## Contents

CONTACT US! .....	4
<b>Introducing Sapphire – SMS Plug in.....</b>	<b>5</b>
<b>Platform Support .....</b>	<b>6</b>
<b>System Requirements.....</b>	<b>6</b>
<b>Network Management .....</b>	<b>7</b>
SMS-WAY.....	7
CONFIGURATION DETAILS FOR GET_ROUND_TRIP .....	7
<b>Appendix .....</b>	<b>9</b>
CONFIGURATION DETAILS FOR PARAMETER MONITOR.....	9
CONFIGURATION DETAILS FOR APPLICATION MONITOR.....	10

## **About This Document**

This document introduces Sapphire – SMS Plug in an SMS based product, and various case studies to explain the usage scenario of the plugin

## ***Contact Us!***

Your feedback on the documentation is important to us. Send us e-mail at [sapphire@tecknodreams.com](mailto:sapphire@tecknodreams.com) if you have questions or comments. Your comments will be reviewed directly by the professionals who create and update the documentation.

# Introducing Sapphire – SMS Plug in

Short messaging has taken the world by storm. There has been an explosion of Short Messaging Services (SMS) as cheaper way of communication than a short voice call. SMS is being considered as official mode of communication in many countries.

The phenomenal growth of SMS has brought many applications into the market. These applications typically provide means of sending short messages from the computer. Banking industry and other commercial markets are enjoying the benefit of these applications.

*Sapphire – SMS Plug in* is the result of our focused effort to bring the benefits of short messaging to the management community as well as to provide remote management capability. *Sapphire – SMS Plug in* provides generic framework for the enterprise to communicate with their employees by means of short messages. It is a ready-to-use messenger, which can be integrated to enterprise's existing management systems with great ease.

This provides the great mobility to corporate employees and brings the information to their hand. Operators attending to the fault on the field no longer need to come to office to check the details about the new problem. Neither do they need to wait for the administrator to call and inform them about the (potential) problem in their network/systems. *Sapphire – SMS Plug in* provides unique way of communicating the problems occurred in the network/systems to the operators. Operators have the option of taking the responsibility of resolving the problem based upon their availability as well as proximity to the location where the problem occurred. This increases the productivity of the employee, which in-turn increases the overall productivity of the organization.

If the operators are busy, Sapphire promptly brings the problem to the attention on higher authority by escalating it immediately with its unique escalation handling mechanism.

# Platform Support

Sapphire – SMS Plug in has server and client components.

Sapphire - Server is available in the following platforms.

- Windows 2000 / Windows XP

Sapphire - Client is available in the following platforms.

- HP-UX 11.0, SUN Solaris 7.0, Redhat Linux 7.1, Windows NT 4.0 / Windows 2000 / Windows XP

## System Requirements

The system requirements to install and run 'Sapphire – server' are given below.

### Hardware Requirements

Description	Requirement
Processor Speed	Pentium II with 330 MHz and above
Memory	- 128 MB (Minimum) - 256 MB (Recommended)
Free Disk-space	- 100 MB (Minimum) - 200 MB (Recommended)
Peripheral devices	- Serial communication port (1 number) - Network card (1 number, to support TCP/IP based messaging from remote systems)
GSM Modem	1 Number (Currently supported modems are Siemens TC35, Nokia data suite with compatible Nokia mobile phones, Wismo)
GSM Connectivity	SIM Card for cellular phone connection

### Software Requirements

Description	Requirement
Operating System	Windows 2000 / Windows XP
Database Driver	MS-Access database driver

# Network Management

Network Management Systems are widely used when a huge network is to be managed effectively. Popular NMS products available are HP-Open View, IBM - Tivoli and lots more. These products provide sophisticated UI to manage the network by sitting in front of your Desktop. Internet provided the capability of web-based management to the network operators. Web-based management requires the operators to carry either laptop or have an access to PCs.

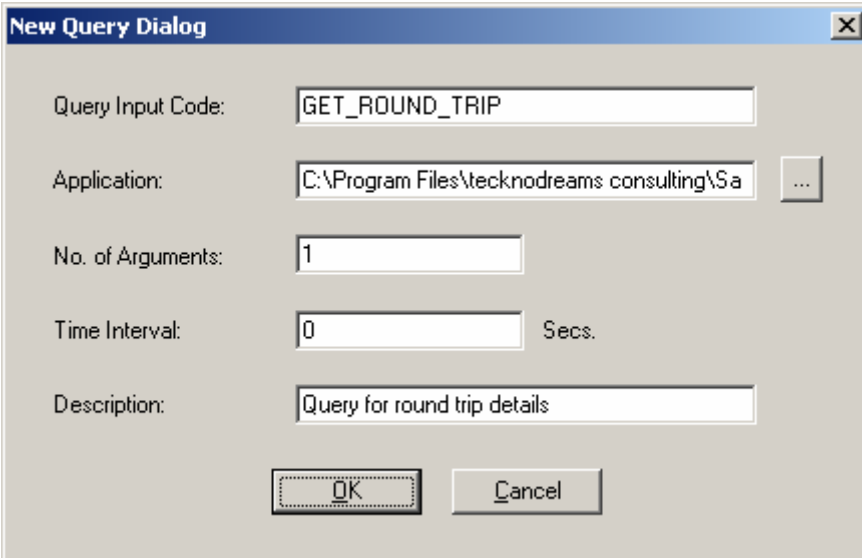
## SMS-way

When the Network administrator has a SMS enabled mobile phone, he no longer has to be in front of his Desktop to monitor the Network elements. He can configure in such a way that he can get automatic alerts of some critical system failures or threshold variations. He can also perform a query to get the status of the system as well as to get parameter values. Let us take a couple of instances where this would be useful.

When the Network Administrator wants to know the whether a critical router is up and running all he has to do is send an SMS message. For example, 'GET\_ROUND\_TRIP' message represents 'getting round trip'.

## Configuration Details for GET\_ROUND\_TRIP

**This section provides the details to configure a round trip query. This is as shown in Figure 1**



The image shows a 'New Query Dialog' window with the following fields and values:

- Query Input Code: GET\_ROUND\_TRIP
- Application: C:\Program Files\tecknodreams consulting\Sa
- No. of Arguments: 1
- Time Interval: 0 Secs.
- Description: Query for round trip details

Buttons: OK, Cancel

**Figure 1 Configure Round Trip Query**

The following procedure describes how to use the console to set the attributes for configuring a round trip query.

1. Double click to open the 'Sapphire Configurator'
2. Double Click the Queries node in the left-hand pane to launch the 'New Query Dialog' screen. Alternatively the menu or pop-up options can also be used to launch the screen
3. Fill in the configuration information as follows
  - Enter the query code for the query in the 'Query Input Code' field as **GET\_ROUND\_TRIP**
  - In the 'Application' field, choose the round trip query perl script that has to be executed for this query by using the file browse button. For example, if our application is installed, say at "C:\Program Files" then choose the file "C:\Program Files\tecknodreams consulting\Sapphire - Wireless messenger\scripts\roundtrip\rttime.pl"
  - Enter the number of arguments in the 'No of Arguments' field as **1**
  - In the 'Time interval' field, enter the time interval in seconds before which if the query fails to execute and revert back, the operation is cancelled.
  - A brief description and usage of the query can be entered in the 'Description' field
  - Click the 'OK' button and save changes in the database

For getting response, we also need to create a user(refer Figure 8 User Configurator in user manual about how to create a new user) and assign permission to **GET\_ROUND\_TRIP**(refer Figure 9 New User Permissions in user manual about how to assign permissions). After saving all the changes to the database restart the smsApplication.

Administrator sends the following message.

**GET\_ROUND\_TRIP 1.1.1.16**  
**(1.1.1.13 is the router)**

Administrator gets the round trip delay between the two systems.

#### **Case 1:**

When the device is up and running, the response is

*"Average Round trip time = <x> ms*

#### **Case 2:**

When a wrong IP is provided then the response is

*"Invalid IP Address"*

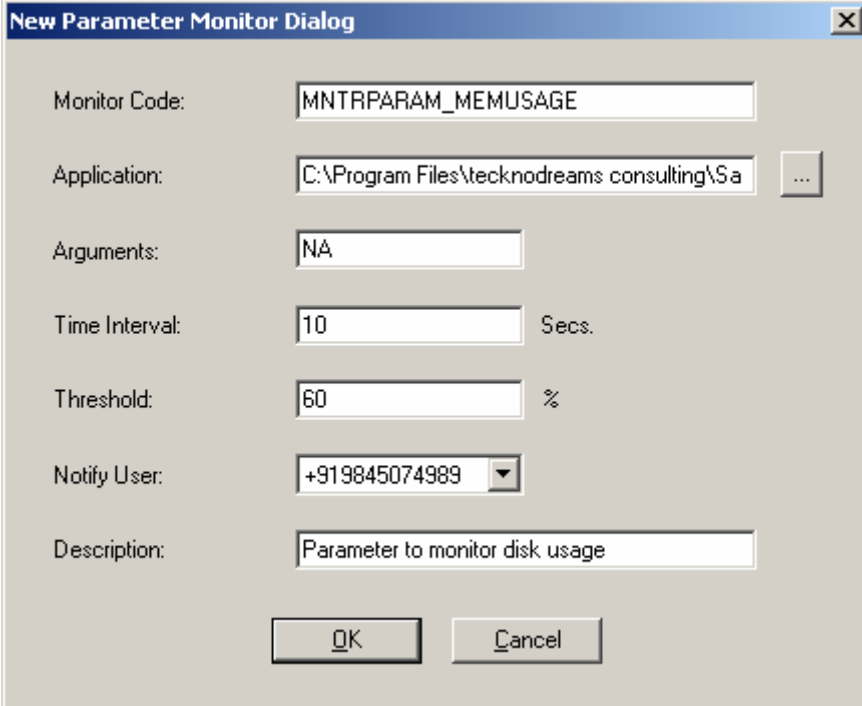
based on which he can take a valid action.

# Appendix

Configuration details for Parameter and Application monitoring are explained in the following section

## Configuration Details for Parameter Monitor

This section provides the details to configure an application to monitor the disk usage. This is as shown in Figure 2



The screenshot shows a dialog box titled "New Parameter Monitor Dialog". It contains the following fields and values:

- Monitor Code: MNTRPARAM\_MEMUSAGE
- Application: C:\Program Files\tecknodreams consulting\Sa (with a browse button)
- Arguments: NA
- Time Interval: 10 Secs.
- Threshold: 60 %
- Notify User: +919845074989 (with a dropdown arrow)
- Description: Parameter to monitor disk usage

At the bottom of the dialog are "OK" and "Cancel" buttons.

**Figure 2 Configure Parameter Monitor**

The following procedure describes how to use the Console to set the attributes for creating an application to monitor the disk usage.

1. Double click to open the 'Sapphire Configurator'
2. Double Click the 'parameter monitor' node in the left-hand pane to launch the 'New Parameter Monitor Dialog' screen. Alternatively the menu or pop-up options can also be used to launch the screen.
3. Fill in the configuration information as follows
  - Enter the monitor code for the action in the 'Monitor Code' field as **MNTRPARAM\_MEMUSAGE**
  - In the 'Application' field, choose the disk monitor perl script that has to be executed for this query by using the file browse button. For example, if our

application is installed, say at "C:\Program Files" then choose the file "C:\Program Files\tecknodreams consulting\Sapphire - Wireless messenger\scripts\diskmon\launchdiskmon.pl"

- Set Arguments in the 'Arguments' field as '**NA**'(for this monitor the application need not take any arguments)
- In the 'Time interval' field, enter the time interval in seconds on which an alert is sent to the user, say 10 secs.
- In the 'Threshold' field, enter the threshold value on reach of which an alert is sent to the user, say **60%**
- Select the user(s) to whom the message has to be sent for this event.
- A brief description and usage of the parameter can be entered in the 'Description' field
- Click the 'OK' button and save changes in the database

After saving all the changes to the database restart the smsApplication. Application will be configured to monitor the memory usage of the system. Gets the system memory usage at the specified time interval. The following response is generated.

#### **Case 1:**

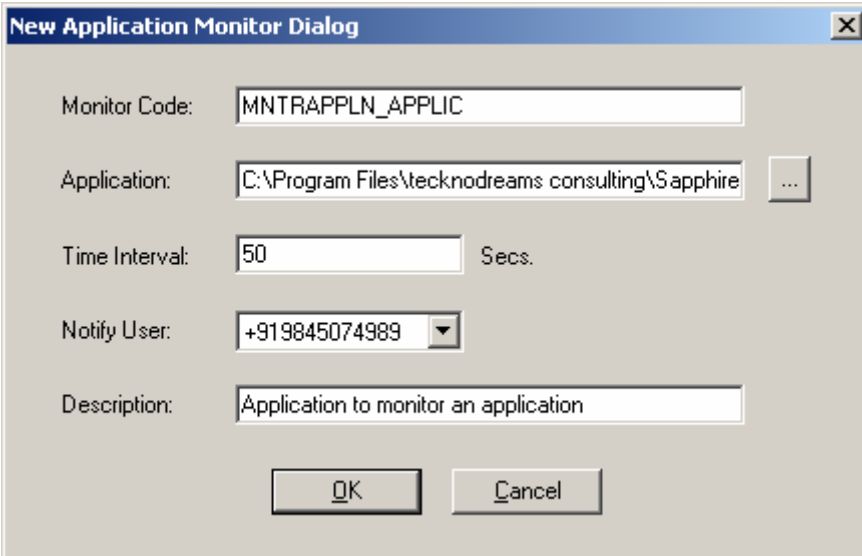
When memory usage is more than threshold value, the configured user/admin will be notified.

*"Memory 85 %"*

## **Configuration Details for Application Monitor**

This section provides the details to configure an application to monitor whether the application is running or not at the configured time interval. This is as shown in **Figure 3**

**Figure 3**



The screenshot shows a dialog box titled "New Application Monitor Dialog". It contains the following fields and values:

- Monitor Code: MNTRAPPLN\_APPLIC
- Application: C:\Program Files\tecknodreams consulting\Sapphire
- Time Interval: 50 Secs
- Notify User: +919845074989
- Description: Application to monitor an application

At the bottom of the dialog, there are two buttons: "OK" and "Cancel".

### Figure 3 Configure Application Monitor

The following procedure describes how to use the Console to set the attributes for creating an application monitor.

1. Double click to open the 'Sapphire Configurator'
2. Double Click the 'Application Monitor Dialog' node in the left-hand pane to launch the 'New Application Monitor' screen. Alternatively the menu or pop-up options can also be used to launch the screen.
3. Fill in the configuration information as follows
  - Enter the monitor code for the action in the 'Monitor Code' field as **MNTRAPPLN\_APPLI**
  - In the 'Application' field, choose the application monitor perl script that has to be executed for this query by using the file browse button. For example, if our application is installed, say at "C:\Program Files" then choose the file "C:\Program Files\tecknodreams consulting\Sapphire - Wireless messenger\scripts\Applicscript\applicmon.pl"
  - In the 'Time interval' field, enter the time interval in seconds on which an alert is sent to user, say **50 secs.**
  - Select the user(s) to whom the message has to be sent for this event.
  - A brief description and usage of the application can be entered in the 'Description' field
  - Click the 'OK' button and save changes in the database

After saving all the changes to the database restart the smsApplication. Application will be configured to monitor whether the application is running or not at the configured time interval. The following response is generated.

#### Case 1:

When the application is running, the response is

*"application is running "*

#### Case 2:

When the application is not running, the response is

*"application is not running"*

#### Conclusion:

Using SMS any complicated Network Management can be made to look simple by just configuring the SMS application interface accordingly. It could be just an extension to the NMS but yet provides the required mobility to the administrators.