

# **Exercise Nebula Gemini Code Contingency**

## **24th October 2013**

### **Results and Findings Report**

#### **Version 1.0 Approved**

#### **Executive Summary**

Gemini Code Contingency Exercise Nebula, held on Thursday 24<sup>th</sup> October 2013 was facilitated by Xoserve, acting as the Transporters' Agent. It was primarily arranged to test the effectiveness of the Code Contingency Guidelines Document and the industry response to a simulated Gemini Code Contingency. This exercise was carried out to test communication channels only.

The exercise was completed successfully in accordance with the planned timeline, without encountering any major problems and included representation from all the different industry Users but identified:

1. The awareness and application of the Gemini Code Contingency Guidelines was improved for the majority of the Users that participated in the exercise.
2. From the responses that National Grid received, it was evident that there is a disparity in the level of Users' awareness of their responsibilities to the exercise and of the steps to take in an incident.
3. There was a lower level of participation from Users that had confirmed they would participate in the exercise which decreased the significance of the findings.
4. ANS messages were sent out at the start and end of the exercise but no data was available to determine how many Users read each of the messages.
5. There is scope to improve the usability of the templates used to exchange data.
6. There is scope to make the Code Contingency Guidance documentation easier to follow.
7. National Grid processes were robust and are able to facilitate a Gemini incident.

The following pages contain a summary of the scope of the exercise, the tests carried out, observations, feedback from participants and recommendations.

## **Contents**

1.0 Introduction	- Page 3
2.0 Scope	- Page 4
3.0 Scenario Outline	- Page 5
4.0 Observations	- Page 6
5.0 Summary of Exercise Nebula Findings	- Page 7
6.0 Feedback on the exercise	- Page 8
7.0 Recommendations	- Page 9
Appendix A Questionnaire	- Pages 10 - 12
Questionnaire Comments	- Pages 12 - 13

## 1.0 Introduction

Following a series of errors that occurred on 22<sup>nd</sup> October 2007, National Grid suspended UNC User access to the Gemini system and instigated the Code Contingency arrangements.

Users were required to fax nominations directly to National Grid to upload manually onto the Gemini System. These arrangements remained in place till the system was restored on the 26<sup>th</sup> October 2007.

The suspension of the system, and the effectiveness of the Code Contingency processes required to be undertaken, highlighted the importance of having clear, easily accessible and familiar Code Contingency processes in place.

As a result of these events UNC Review Group 0217 - 'Review of the Code Contingency Arrangements' was established to review the Gemini Code Contingency procedures and recommend the necessary improvements.

The Review Group recommended that:

- all Code Contingency processes and documentation should be consolidated into a single Document
  
- this document should be easily accessible  
and
- there should be regular testing of the Gemini Code Contingency arrangements.

They considered that such changes may go some way to mitigate some of the risks and concerns associated with system suspension events experienced in October 2007.

The Review Group agreed that familiarisation with the Code Contingency procedures, by all affected parties, was critical to the successful deployment of the Code Contingency arrangements. This in turn provides all parties with the continued capability to meet their Code obligations during Gemini system failure. Provision of a scheduled 'Dry Run' testing programme (Exercises) of the Gemini Code Contingency arrangements may help to facilitate such familiarisation.

The outcome of the Review Group was the implementation of Modification Proposal 0250 – 'The Introduction of Gemini Code Contingency Guidelines', which amongst other changes, proposed that National Grid and its Agent initiated a Gemini Code Contingency testing programme at least every two years. The general view expressed in response to the Proposal's consultation was that such a programme would achieve two key benefits:

1. Familiarisation with the Code Contingency procedures, by all affected parties, critical to the successful deployment of the Code Contingency arrangements. This in turn provides all parties with the continued capability to meet their Code obligations during Gemini system failure.
  
2. Code Contingency arrangements for any new functionality, implemented through the Gemini system, is tested to ensure that the necessary processes and provisions are in place, and affected parties are familiar with such processes.

Exercise Nebula is the second exercise of this type and was held on Thursday 24th October 2013. The first of these exercises was called Exercise Star, and was held on Wednesday 8th September 2010, the final report for this exercise can be found via the following link:- [http://www.xoserve.com/wp-content/uploads/Gemini\\_Code\\_Contingency\\_Exercise\\_Star\\_2010.pdf](http://www.xoserve.com/wp-content/uploads/Gemini_Code_Contingency_Exercise_Star_2010.pdf)

The exercise tested the familiarisation of all affected parties with the Code Contingency procedures, and that communications and information transfer via the methods stipulated in the procedures are effective.

## 2.0 Scope

The primary reason for this exercise was to test the communication channels in the event of a Gemini contingency situation. This was a one day exercise simulating a one Gas Day Gemini outage. Users were instructed to take part in the same Gemini activities they had for Gas Day 24th October 2013 as a paper exercise using the contingency proformas. The exercise took place during normal business hours of 09:00 to 17:00 and all participants were asked to complete a feedback questionnaire after the exercise had finished.

The industry was advised of the date and intentions of the exercise at the August 2013 UK Link Committee meeting and then an update at the October 2013 meeting. The Exercise Nebula information pack was published on the Gas Governance website a month prior to the exercise taking place and can be found via the following link:- <http://www.gasgovernance.co.uk/uklc/101013> Xoserve also emailed all Gemini Users twice during September 2013, in addition Xoserve also contacted Users that did not respond via telephone and or email and also sent a final reminder out on the day before the exercise took place which included a copy of all of the templates to be used during the exercise.

The communications explained that all Gemini Users are required to participate as per the Gemini Code Contingency document and also confirmed which Energy Balancing, NTS Entry & NTS Exit Capacity activities the exercise applied for. The exercise would have no impact on normal operational activities during Gas Day 24th October 2013.

This was a paper exercise run alongside normal daily operations. Users were able to send in completed templates via fax or email. National Grid did not enter any data into Gemini that related to the exercise. All communications were prefixed `Exercise Nebula`.

This exercise intended to test the daily processes including Energy Balancing actions, daily Entry Capacity auctions and short term Exit Capacity Auctions.

### Energy Balancing:

- GE01\_1 Nominations, Renominations & Gas Trades
- GE01\_2 OCM Physical Trades
- GE01\_3 DM Nom Position

### Entry Capacity:

- GC04\_2 – Short Term Entry Capacity – WDDSEC
- GC04\_3 – Short Term Entry Capacity – DISEC
- GC06\_1 – Entry Capacity Trading

### Exit Capacity

- GC10\_1 – Short Term Exit Capacity – DADNEX
- GC10\_2 – Short Term Exit Capacity – DONEX
- GC10\_3 – Short Term Exit Capacity – WDDNEX
- Constraint Management was considered unlikely in a one day outage.

Communication from National Grid was via email and the Active Notification System (ANS) which is a type of pager system used to inform Users of operational issues, requirements and events. During an actual Contingency National Grid's website would also be updated, but it was decided that to avoid confusion the website would not be used during the exercise.

Only 2 ANS messages were issued during Exercise Nebula to indicate the start and end of the exercise.

For clarity an ANS message was sent on the morning before the exercise commenced which read:

*'Exercise Nebula will be commencing shortly, please note that normal operations are not affected and data for Gas Day the 24th October must still be entered into Gemini. Exercise Nebula is a communications exercise only.' Could all participation users please submit form GCCD01 with contact details for the day.*

An ANS message was also sent out at the end of the exercise which read:

*'Please note that Exercise Nebula has now completed. We no longer require Gemini activities to be submitted via contingency proformas. Many thanks to all that have participated today.'*

### **3.0 Scenario Outline**

The scenario assumed that Gemini is unavailable. This meant Users must complete the relevant contingency proformas and submit them in a timely manner to the correct National Grid recipient, who in an actual Contingency situation would collate and then have the information entered into Gemini as soon as possible after the Gemini system was restored.

### **Checking of Energy Balancing, NTS Entry capacity & NTS Exit Capacity data submitted**

All the User contact details and a sample of the data received by National Grid via emails and faxes were collated and the data was checked to the live Gemini system to make sure that the activities had been entered as normal onto the live Gemini system.

## 4.0 Observations

1. A couple of weeks before the exercise, National Grid received a few queries from different Users in relation to how Exercise Nebula would operate on the day. Clarification was given that the exercise would run in parallel to the normal gas day operations.
2. A few Users sent in data relating to activities on Gemini before the 9am start time.
3. Faxed information was illegible in some cases, as some were handwritten entries.
4. One User called to ask if the exercise had started.
5. Some Users reported that they had not received an ANS message.
6. Due to the number of errors on the faxes and emails submitted it is worth preparing further information on how to complete the templates.
7. No data was submitted on the 24<sup>th</sup> October 2013 for 3 of the 9 test areas – GC10\_1 DADNEX, GC10\_3 WDDNEX and GE01\_2 OCM Physical Trades. However this was as expected as there was very little activity in these 3 areas on Gemini for the gas day 24<sup>th</sup> October 2013.
8. Few responses were received during the first hour following the initial ANS message advising of the start of the Nebula.
9. By the deadline, 41 Users had submitted data relating to 6 of the 9 test areas. 71% of data submitted related to GE01\_1 relating to nominations & renominations.
10. A number of Users sent in data on templates which when checked by National Grid did not match data on the live Gemini system. Users were contacted by National Grid to ensure data had not been missed on the live Gemini system.
11. A number of Users submitted data with an incorrect User short code.
12. A number of Users submitted data for multiple short codes on the same form.

## 5.0 Summary of Exercise Nebula Findings

1. There was a lower level of participation from Users than expected.

- 76% of the Users in Gemini had indicated that they would take part.
- 25% of the Users in Gemini actually took part in the exercise.
- 34% of Users in Gemini were actually covered as 1 User represented 15 for the exercise.

• 24% of Users were either not contactable or did not confirm they would take part despite multiple attempts via email and telephone to gain participation in the exercise.

2. Data submitted on the day of the Exercise is detailed below:-

- GCCD – Shipper Contact details 3.9%

Energy Balancing:

- GE01\_1 Nominations, Renominations & Gas Trades 72.1%
- GE01\_2 OCM Physical Trades 0.0%
- GE01\_3 DM Nom Position 11.2%

Entry Capacity:

- GC04\_2 – Short Term Entry Capacity – WDDSEC 2.8%
- GC04\_3 – Short Term Entry Capacity – DISEC 3.9%
- GC06\_1 – Entry Capacity Trading 2.2%

Exit Capacity

- GC10\_1 – Short Term Exit Capacity – DADNEX 0.0%
- GC10\_2 – Short Term Exit Capacity – DONEX 3.9%
- GC10\_3 – Short Term Exit Capacity – WDDNEX 0.0%

3. Errors in data submitted on the day of the Exercise are detailed below:-

Energy Balancing:

- GE01\_1 – Nominations, Renominations & Gas Trades 7.3%

Entry Capacity:

- GC04\_2 – Short Term Entry Capacity – WDDSEC 0.6%
- GC04\_3 – Short Term Entry Capacity – DISEC 0.6%

Exit Capacity

- GC10\_2 – Manage Short Term Exit Capacity – DONEX 0.6%

4. Only 17% of Users that participated in the exercise on the 24<sup>th</sup> October 2013 provided contact details on the GCCD\_1 template hence there was very little contact information available to the National Grid operational staff to assist with communications. Although in a real contingency National Grid would utilise all other sources of contact details available to them, the Contact Information requested in a Contingency remains the primary source available and is contained within the Code Contingency Document to assist National Grid with accurate and timely communications.

5. National Grid had robust checks in place to identify if duplicate data is sent in via fax and or email – on the day of the exercise National Grid were checking for duplicate data.

6. Users were pleased with confirmation emails from National Grid, acknowledging that data submitted had been received. Feedback was received from Users stating that it would have been good to know if the data submitted was correct on the templates. However in a genuine contingency situation National Grid would be unable to check data submitted was correct.

## **6.0 Feedback on the exercise**

A questionnaire was emailed directly to all the exercise participants to try and capture sufficient qualitative information to understand Users' views of the exercise and their perceptions of the Contingency process. The questionnaire contained 13 questions and a final section for comments. Details of the questions and the responses are captured in Appendix A. For anonymity, any text that identifies an individual or company has been removed.

Questionnaires were completed by 83% of the Users that took part in the exercise. This represented 21% of the total number of Users live in Gemini that could have taken part in the exercise. This number of responses does not give a proportional representation of the industry (although it does give a good indication of Users that took part in the exercise) and consideration must be given to the bias of the responses that were only provided by Users that participated in the exercise.

Responses relating to communication before the exercise are misleading because they have been provided by people who were aware of the exercise.

In relation to the 24% of Users that did not take part in the exercise the two main reasons were:

1. Not enough staff available on the day to take part in the exercise.
2. Some Users simply did not reply to any of the emails or telephone calls made relating to this exercise.

Three Users that had initially indicated that they would take part confirmed on the day before the exercise that they would not be able to take part due to availability of staff.

Feedback from the questionnaire identified that there is a disparity in the level of Users awareness and application of the principles. The majority of Users that replied to the questionnaire found the exercise useful in improving awareness. Some Users found the templates and communication tools acceptable but there was feedback requesting changes to the templates used.

### **Strengths**

- Users thought sufficient prior communication of the exercise was given to the industry, although this was not supported by the number of Users that took part.
- The majority of Users located the supporting documentation on the Gas Governance website.
- The majority thought the communication during the exercise was clear, concise and timely.
- The majority of Users felt the exercise had met the objectives of improving their awareness and application of the Gemini Code Contingency Guidelines.
- Most Users agreed that the Process Flow Diagrams were effective.
- 60% of Users agreed that the Gemini Code Contingency Guidelines straightforward and 40% of Users somewhat agreed.



## **Weaknesses**

- Concerns were raised by some Users around the use of ANS handsets – 1 Users ANS was not working on the day of the exercise, 1 User did not know what ANS was, some Users stated that they did not have 24 hour access to ANS due to their working practices.
- Some Users had issues with the proformas, mainly formatting.

## **7.0 Recommendations**

1. There is an opportunity for improvement in the number of participants in future exercises.
2. Users need to ensure that their Operational contacts know where their ANS handsets are and that they are in a state to receive messages. If there is a problem this should be reported and their contact information recorded in the ANS Backup Fax list.
3. The accessibility of the Exercise pack can be improved to address the main concerns and Questions raised by Users.
  - The pack will benefit from being more accessible from Xoserve's website with a link from National Grid's website to the Xoserve website for consistency.
  - The formatting of the exercise proformas needs to be amended (merged cells to be removed) to make copying data into them easier.
4. Users should familiarise themselves with the Gemini Code Contingency Guidelines to reduce the current level of disparity.
5. All Users should participate fully in future exercises so that the results are more robust and reflective of the industries awareness and readiness for a contingency situation.
6. During the exercise 97% of data submitted by Users was via email. Some data that was sent in by fax was illegible and had to be queried with the User. The use of faxes in Contingency situations should be reviewed. Not all shippers have access to or simply no longer use fax machines. However it should be noted that that under UNC fax is a formally recognised form of communication where as email is not formally recognised. In addition if a User has lost internet access and is using contingency processes then they will need to use faxes.

## 8.0 Appendix A – Shipper Feedback Questionnaire

**Question 1a - Sufficient prior communication of Exercise Nebula was given via the UK Link Committee and Transmission Work stream.**

	<b>Nebula</b>	<b>Star</b>
Agree	80%	95%
Somewhat Agree	20%	5%
Disagree	0%	0%

**Question 1b - Sufficient prior communication of Exercise Nebula was given via Xoserve.**

	<b>Nebula</b>	<b>Star</b>
Agree	94%	N/A
Somewhat Agree	6%	N/A
Disagree	0%	N/A

**Question 2 - We were aware of our role and the actions to take prior to Exercise Nebula.**

	<b>Nebula</b>	<b>Star</b>
Agree	83%	82%
Somewhat Agree	17%	18%
Disagree	0%	0%

**Approved**

**Question 3 - Our Company has 24 hour access to ANS.**

	<b>Nebula</b>	<b>Star</b>
Agree	71%	95%
Disagree	29%	5%

**Question 4 – We were able to locate the necessary documents and templates on the Joint Office website.**

	<b>Nebula</b>	<b>Star</b>
Agree	83%	91%
Somewhat Agree	11%	0%
Disagree	6%	9%

**Questions 5 – The communications from NG at the start and end of the exercise via ANS were clear and concise.**

	<b>Nebula</b>	<b>Star</b>
Agree	63%	68%
Somewhat Agree	23%	27%
Disagree	14%	5%

**Question 6a – The process flow diagrams within the Gemini Code Contingency guidelines V3.1 on the National Grid website accurately reflect the roles and activities that need undertaking.**

**– (search by keyword Contingency on website for this document – in top right hand corner of main website page)**

	<b>Nebula</b>	<b>Star</b>
Agree	71%	65%
Somewhat Agree	29%	15%
Disagree	0%	20%

**Question 6b – The process flow diagrams are effective.**

	<b>Nebula</b>	<b>Star</b>
Agree	71%	55%
Somewhat Agree	29%	25%
Disagree	0%	20%

**Question 7 – The Code Contingency guidelines are straight forward to follow.**

	<b>Nebula</b>	<b>Star</b>
Agree	66%	50%
Somewhat Agree	34%	45%
Disagree	0%	5%

**Question 8 – The templates are easy to complete and submit.**

	<b>Nebula</b>	<b>Star</b>
Agree	80%	64%
Somewhat Agree	20%	32%
Disagree	0%	5%

**Question 9 – There was a query on our data from NG during the exercise.**

	<b>Nebula</b>	<b>Star</b>
Agree	14%	18%
Disagree	86%	82%

**Question 10 – Exercise Nebula met the objective of improving our awareness and application of the Code Contingency guidelines.**

	<b>Nebula</b>	<b>Star</b>
Agree	69%	73%
Somewhat Agree	28%	22%
Disagree	3%	5%

## Question 11 – We are more aware of our role and the actions required to take after completing Exercise Nebula.

	<b>Nebula</b>	<b>Star</b>
Agree	60%	68%
Somewhat Agree	23%	27%
Disagree	17%	5%

### General comments from Questionnaire respondents:-

- Generally from this Users perspective the exercise was a success but I would always advocate a continuous review of these types of exercises as businesses are always evolving.
- Effective exercise which helped to refresh staff knowledge of procedures and guidelines involved in the system.
- The ANS system was not available to all Users due to staffing, technical or knowledge issues and the messages sent via it did not contain any information about the exercise or were delayed by about 30 minutes.
- Some of the Users requested feedback from National Grid on their forms to know if they had completed them correctly, but didn't receive a response.
- The Exit Capacity Excel templates were originally incorrect - this was spotted by one of the Users during their preparation for the event. The forms were corrected and reissued to all participants by email and also re published on the Gas Governance website before the 24<sup>th</sup> of October 2013.
- The formatting of the Excel templates, particularly of merged cells made it unnecessarily difficult to fill in the forms as it meant that it was not possible to copy and paste blocks of data in to the forms.
- The exercise was a useful reminder of the contingency arrangements and it would be useful to do a similar exercise each year.
- More information was required about the exercises objectives - was it run in parallel to the live process and matched to Gemini.
- As the exercise took place between 09:00 and 17:00 there was no opportunity to practice capacity trades.  
In response National Grid have confirmed: *Trades can be entered into the system at any time and within day capacity trading (GC06\_1) was within the scope of Exercise Nebula. Therefore any capacity trading on the day could have been captured. However we will consider including processes that may be carried out of office hours in future exercises.*
- It was unclear how to manage re nominations of customer volumes as we were not sure how often updates are needed.

- There were a few questions about what would happen in the event of a real Gemini outage about matching with a counterparty and how it would be possible to know if this has happened successfully or if a rejection has occurred.

In response National Grid have confirmed: *In a real Gemini outage we would expect to receive completed forms from both counterparties and would check that these matched. We would inform via email/fax that it had been successfully matched.*

- How would the capacity being allocated be communicated in the event of a real Gemini outage?

In response National Grid have confirmed: *We would communicate via Email/ Fax and/or ANS message that capacity had been successfully allocated.*