Datacentre and Cloud Services

Operational Requirement

OJEU Contract Notice 2011/S 191-311680

This document and the information it contains are provided solely for the purpose of allowing potential suppliers to provide a tender for the services being procured. It is issued under the Restricted Procedure of the European Procurement Directive.

Responses to this Operational Requirement will only be accepted from suppliers short-listed to receive this procurement document

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1. INTRODUCTION

This document is the Operational Requirement (OR) for datacentre and cloud services.

The procurement will be managed according to the restricted procedure as specified by the Public Contracts Regulations 2006 (as amended), and this document is an integral part of the restricted procurement announced by JANET(UK) in the Supplement to the Official Journal of the European Union (OJEU Contract Notice 2011/S 191-311680).

1.1 Contracting Authority

The contracting authority is the JNT Association, trading as JANET(UK).

1.2 Outline of Requirement

JANET(UK) intends to establish a multi-supplier framework agreement with a maximum of eight suppliers who will then be in a position to respond to the needs of the JANET community for data centre facilities and computing infrastructure (either on campus, off campus or both). These facilities will accommodate Customer, supplier owned or leased equipment. Suppliers will be expected to offer computing services on a subscription model such that capital outlay is minimised or ideally removed altogether. The scope of the framework agreement will cover purchases by JANET(UK) and JANET connected organisations, Regional Network Operators and members of the Purchasing and Regional Broadband Consortia, who are referred to as the Customers throughout this document.

The outcome of the procurement will be up to eight equally ranked suppliers on the framework. Prior to placing an order under the framework, Customers must run a mini-competition with all capable suppliers to select the supplier that meets its individual requirements.

A requirement of this procurement is to provide access to economies of scale in datacentre and cloud usage for the JANET community. JANET(UK) has considered the study undertaken at the University of California at Berkeley[1]. This study shows that it is possible for institutions to attain economies of scale of the order of 7:1 relative to their current scale of operation by engaging with suppliers with the necessary large scale capability.

Part of the economies of scale will be the assurance that large consumer items are procured at best value and JANET(UK) therefore requires proof that the supplier has suitable supplier agreements and relationships in place to support this aspiration.

JANET(UK) will expect suppliers to provide highly robust and secure datacentre facilities and that appropriate accreditations are complied with to illustrate best practice in this regard. Security, environmental and quality management should be in line with appropriate ISO standards.

Suppliers must meet the requirements of the EU data protection legislation. For US companies, demonstration that the US-EU Safe Harbour Scheme and the USA Patriot Act have been taken into account and any issues highlighted. This may impose restrictions on the services that can be offered which will be documented in service level agreements.

To ensure connectivity is of an appropriate performance and latency suppliers will be expected to have appropriately specified connections to the JANET network. JANET(UK) will facilitate the provision of these connections but any initial and recurrent costs associated with this connectivity will be borne by the supplier.

JANET(UK) is aware of a number of additional services that datacentre services suppliers provide such as disaster recovery, data management and security. JANET(UK) wishes to investigate any additional services that suppliers feel would complement the datacentre services they propose.

JANET(UK) wants to stimulate innovation both commercial and technical to develop solutions that will reduce implementation time and cost as well as encouraging the long term sustainable use of

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[1] http://www.eecs.berkeley.edu/Pubs/TechRpts/2009/EECS-2009-28.pdf

cloud computing. This should be seen as something that would be done both on a project by project basis but would also include sector wide solutions. As part of encouraging the take up of cloud computing JANET(UK) is also keen to understand how suppliers will promote and develop their products during the framework's lifespan.

The JANET Eligibility Policy defines the conditions under which any organisation is eligible for JANET services. The present Eligibility Policy is available at:

http://www.ja.net/documents/publications/policy/eligibility-policy.pdf

1.3   Regional Network Operators (RNOs)

The delivery of JANET services to customer sites is currently provided largely through a number of regional networks, some of which are managed by JANET(UK) and others by Regional Network Operators (RNOs). RNOs are regional consortia of higher and further education institutions or corporate entities delivering JANET services, each operating a network within its own geographical area.

Details of these regional networks are available at:

> http://www.ja.net/services/connections/janet-sites/mans/index.html

1.4   Purchasing Consortia

The Purchasing Consortia are independent organisations that provide a wide range of collaborative purchase agreements to their member institutions - Universities and Colleges - through consensus and the common desire to maximise their purchasing power in the market place. Members will be eligible to purchase from this framework agreement. The membership of the Consortia may change in the future owing to strategic realignment or the inclusion of new full or associate members, who could be outside the education/research sector, but within the public sector. Any members joining the purchasing consortia will be able to access the resulting agreement.

A list of members of each of the Purchasing Consortia is available at:

> http://www.lupc.procureweb.ac.uk/members/index.shtml
>
> http://supc.procureweb.ac.uk/aboutsupc/supc-members
>
> http://www.nwupc.ac.uk/members/index.php
>
> http://neupc.procureweb.ac.uk/index.php
>
> http://hepcw.procureweb.ac.uk/aboutus
>
> http://www.apuc-scot.ac.uk/home.htm
>
> http://www.wfepc.com

1.5   Regional Broadband Consortia (RBCs)

JANET provides services to many Local Authority education networks, in support of ICT provision in schools and in personal and community development learning. The National Educational Network is a dedicated, educationally focused resource for teaching and learning. A number of regional networks are constituent parts of The National Education Network. These are operated by the Regional Broadband Consortia. A full list of members of the Consortia is available at:

> http://www.nen.gov.uk

Whilst all members of the Consortia are eligible to make use of the framework agreement, those members that have indicated they wish to make use of the framework agreement are listed in the appendix to this document.

2. PROCUREMENT PROCEDURE

Suppliers are now invited to respond to this Operational Requirement. The responses will be evaluated against the evaluation criteria listed in section 2.4 of this document. Each supplier has received a copy of JANET(UK)'s standard framework agreement. This standard framework agreement will provide the basis for concluding any contract.

2.1 General Issues

All formal communication with suppliers over the course of the procurement will be handled or arranged by JANET(UK).

Responses to this OR will only be accepted from suppliers that have been short-listed to receive this document.

2.2 Clarifications to the requirements

Suppliers will be provided with clarification of JANET(UK)'s requirements in accordance with the European Directive.

Suppliers should raise any issues of clarification via the JANET(UK) e-tendering opportunities portal at https://tenders.ja.net. Where issues of clarification arise which are relevant to more than one candidate, each supplier will be notified via the JANET(UK) portal. Any clarification request should be submitted by no later than the date given in the timetable in section 2.3, as JANET(UK) cannot guarantee to answer any requests submitted after this date.

2.3 Timetable

The steps and timetable for this procurement are as follows:

Activity	Date
Issue of OR to shortlisted suppliers	17th November 2011
Final date for clarifications	15th December 2011
Closing date for tenders	**12:00 Noon on 22nd December 2011**
Selection of preferred suppliers	27th January 2012
Contracts placed by	29th February 2012

JANET(UK) reserves the right to vary this timetable if the need arises, within the constraints of the European Procurement Directive.

JANET(UK) reserves the right not to award a contract.

Tenders will be expected to remain valid for six months after tender submission.

JANET(UK) may invite suppliers to attend tender clarification meetings if required.

2.4 Evaluation

The contract will be awarded on the basis of the offers that are the most economically advantageous. The main criteria to be used in determining which offers are the most economically advantageous will be:

	Marking	Item
1.	Pass/Fail	The supplier's ability to meet the mandatory requirements (as defined in section 3).

	Marking	Item
2.	70% of total marks.	JANET(UK)'s assessment of the supplier's technical merit and quality to enable it to provide the services described in this document on a timely basis based on the responses to the information requirements, JANET(UK) will also take into account any information it holds on the performance of current suppliers it uses when evaluating the tender responses.
3.	30% of total marks.	Charges IR65 scores 200 marks, the score will be worked out using the formula: $$\frac{\text{Lowest price}}{\text{Price being evaluated}} \times 200$$

Each section (3.2.1, 3.2.2, etc) has a total of 100 marks allocated to it including all subsections if applicable. Once the OR response has been evaluated the final mark will be based upon the relative weightings of that section.

Section	Weighting	Applicable IRs
3.2.1 Secure datacentre and co-location provision	10	
3.2.1.1 Environmental		IR2,IR3
3.2.1.2 Security		IR6
3.2.1.3 Facility management and support services		IR7, IR8, IR9
3.2.1.4 Cabinet specification and capacity		IR12, IR14
3.2.1.5 Passive infrastructure		IR15
3.2.2 Infrastructure services (IaaS)	12.5	IR17, IR19, IR20
3.2.2.1 Availability monitoring		IR21, IR22, IR23
3.2.3 Billing and reporting tools	2.5	IR25
3.2.4 Information Security	7.5	IR28 – IR34
3.2.5 Technical infrastructure design	10	IR35, IR36
3.2.6 JANET WAN connectivity	2.5	IR38, IR39, IR40
3.2.7 Disaster recovery	5	IR41
3.2.8 User access management	2.5	IR42, IR43
3.2.9 Innovation	7.5	IR44, IR45
3.2.9.1 Complementary services		IR46
3.2.10 Product marketing and sales	2.5	IR47
3.4.1 Help Desk	5	IR50, IR52, IR53

3.4.3 Service level agreements	2.5	IR57, IR59, IR60
4.1 Customer charging	23	IR61, IR63, IR64, IR65
4.2 JANET Brokerage sustainability charging	7	IR67

Each IR has the mark allocated to it indicated at the end of the IR text. A supplier's IR responses will be marked on a sliding scale between the indicated maximum and minimum (0) scores and the statements given below are for indicative purposes only:

- A maximum score will be given where the response fully meets the requirement/answers the question.
- A score of up to two thirds of the maximum will be given where the response meets most of the requirement/answers most of the question.
- A score of up to one third of the maximum will be given where the response partially meets the requirement/answers part of the question.
- A zero score will be given where the response does not meet the requirement/answers the question at all.

Each participating member of the evaluation panel will mark the supplier's response on a sliding scale between the indicated minimum (0) and maximum marks. All of the questions will be independently marked by more than one member of the panel. Where a set of given marks from the panel are within 1 point of each other, an average of them will be taken. Where the marks obtained vary by 2 or more, a further review and moderation process will occur and the marks adjusted so that a variation of no more than 1 applies.

JANET(UK) may seek clarifications prior to the preferred suppliers being selected. Once the preferred suppliers have been selected JANET(UK) will seek to confirm commitments and sign contracts with the preferred suppliers.

The outcome of the procurement will be up to eight equally ranked suppliers on the framework. Prior to placing an order under the framework, Customers must run a mini-competition with all capable suppliers to select the supplier that meets its individual requirements.

2.5 Delivery of tenders

Suppliers are required to upload their response to the JANET(UK) e-tendering portal by the time and date specified in section 2.3.

The documents must be provided in PDF format with the exception of spreadsheets that should be provided in Excel format. Any non-standard fonts used in submissions must be embedded in the document.

Please do not try to upload documents very close to the closing time of the procurement, because the tender boxes will be locked at 12:00 and any documents that are part way through being uploaded will be rejected.

In order to assist in the evaluation of tender responses, each supplier is asked to provide its response in one document rather than submit a main document with reference to other separate documents. As part of this process, each supplier should provide the pertinent information within the response document rather than submitting a large annex document that procurement panel members need to read in its entirety in order to obtain the key facts.

A detailed Supplier User Guide on how to use the JANET(UK) e-tendering opportunities portal can be downloaded from the portal at https://tenders.ja.net or our website at http://www.ja.net/company/invitations-to-tender/index.html.

A response submitted after the deadline will not be considered.

2.6 Format of tenders

The response to the specific requirements must take the following format:

A   Management Summary

> This section should be a single page summary describing the main points of the bid.

B   Description of Services Proposed

> This section must describe the services proposed. The information required to satisfy all the specific requirements must be provided in this section.

The response must address all the requirements both Mandatory Requirements (MR) and Information Requirements (IR) detailed in all sections of this OR.

The order of replies to requirements (MR and IR) must be given in the same numerical order as they are stated in this document. The reference number and the text of the requirement to which it relates must precede each response.

2.7 Document notation

MRn   A mandatory requirement.

> A solution that does not meet all mandatory requirements will not be acceptable.

> Suppliers must state how all requirements will be met, considering the issues and the points raised. A statement of the form 'this requirement will be met' is not sufficient. Tenders must satisfy all mandatory requirements. Failure to satisfy a mandatory requirement will exclude a tender from further consideration.

IRn   An information requirement

> It is vital that suppliers provide full information on specific topics. These topics are identified as information requirements. Failure in a tender to provide full, relevant information in answer to information requirements will lead to the supplier losing marks. Assessment of the quality of the tender will be based on the responses to these requirements, and will influence the selection process.

3. REQUIREMENTS FOR THE OFFERED SERVICE

3.1 Contract Form

The short list of suppliers will receive a copy of JANET(UK)'s standard form of framework agreement. JANET(UK) requires its standard form of framework agreement to be used to conclude the contract for this procurement. When using the restricted procedure, contracting authorities are prohibited from negotiating with suppliers in respect of the agreement (typographical errors excepted). Therefore suppliers are required to confirm that if they are appointed to the framework agreement they will accept the terms of JANET(UK)'s standard form of framework agreement. Failure to accept these terms will result in a supplier's tender being treated as non-compliant and therefore rejected.

MR1. .... *The supplier must indicate that it will accept the terms of JANET(UK)'s standard form of framework agreement incorporating the pro forma services contract.*

This JANET Brokerage will be sustained by means of supplier contributions. It is anticipated that this will be done in a manner that is linked to Customer adoption of this framework such as to incentivise both JANET(UK) and the supplier to promote this framework for the duration of this agreement. This is outlined further in section 4.2.

3.2 Technical Requirements

3.2.1 Secure datacentre and co-location provision

A secure and well managed datacentre is required both for co-location facilities and for the cloud based infrastructure proposed. This section should be answered for **BOTH** the co-location and the cloud based Infrastructure as a Service, IaaS, proposed. Where different facilities are used to meet the two requirements this must be stated explicitly.

3.2.1.1 Environmental

JANET(UK) expects datacentres to be provided which meet the environmental requirements of the standard server, network and other infrastructure hardware providers such that Customer's systems run in an efficient manner without adversely affecting the operating life of equipment.

IR2. .... *The supplier shall provide a datacentre environment suitable for hosting network and server equipment:*

- *Datacentre temperature will be maintained within set boundaries. The exact temperature thresholds should be stated and a full reasoning provided for the values chosen*

- *Datacentre humidity will be maintained within set boundaries. The proposed range should be stated and a full reasoning behind this provided*

- *The datacentre electrical supply will be provided continuously and consistently. This should reference adequate protection against power spikes and power failures. The capacities and major capabilities of equipment such as UPS and generators should be stated within this response*

- *Fire suppression systems will be in place. Details as to the systems in use and specifications should be provided (25 Marks)*

IR3. .... *The supplier shall state the PUE (Power Usage Effectiveness) rating for each datacentre facility proposed (10 Marks)*

3.2.1.2 Security

MR4. .... *The supplier shall confirm that security facilities and policies are in place to ensure access is limited to only those that are required to have access to the datacentre site*

MR5. .... *For co-location facilities the supplier shall confirm that access to the datacentre is possible 24 hours a day all year round for authorised Customer staff*

IR6. .... *The supplier shall provide details as to how datacentre access is facilitated and how it is limited. This should include any procedures and processes that are used and should include as a minimum those required by Customers to gain access to the datacentre facilities used for co-location (5 Marks)*

3.2.1.3 Facility management and support services

IR7. .... *The supplier shall describe the maintenance and testing procedures that support all datacentre facilities described in the environmental and security sections above (5 Marks)*

IR8. .... *The supplier shall describe the additional services commonly called 'Smart Hands' services provided to assist customers with co-located equipment. The table below should be completed with the services provided and state whether they are within the core co-location service or are supplied as an additional service (5 Marks)*

Service	*Description*	*Core / Additional*

IR9. .... *Customers will require changes to supplier managed infrastructure such as network firewall ports. The supplier shall describe how Customer initiated changes will be managed. (5 Marks)*

3.2.1.4 Cabinet specification and capacity

MR10. .... *The supplier shall provide racks with minimum dimensions of 600mm x 900mm divided into height elements based on the 'u' measurement, 1u=1.75" such that the racks will be able to accommodate 19" rail mounted server and network equipment*

MR11. .... *The supplier shall confirm that racks included within the offered facilities will have a minimum electrical power capacity of 4kW available per rack and associated cooling for that capacity*

IR12. .... *The supplier shall provide information on the current rack capacity available to Customers. This question is co-location specific and therefore no details about virtual servers should be submitted in response to this. Rack power capacity is provided as an illustration of what is required; the supplier shall provide the power densities as specified within its facilities. Suppliers should note that there is an emerging requirement for 30kW racks for High-Performance Computing, HPC, and weight will be given to responses that address this.(25 Marks)*

Datacentre	*No. of 4kW racks*	*No. of 10kW racks*	*No. of 30kW racks*

MR13. .... *The supplier shall confirm that all racks will be lockable and confirm the unlocking mechanism provided e.g. biometric, smartcard, key.*

IR14. .... *Customers want to co-locate all equipment in a contiguous manner so that equipment management is straightforward. The supplier shall describe how co-location facilities will be allocated including mechanisms that ensure equipment can be kept as contiguous as possible. (5 Marks)*

3.2.1.5 Passive infrastructure

IR15. .... *The supplier shall describe the supporting passive infrastructure provided including:*

- *Inter and intra rack containment for power and data*

- *Passive fibre and UTP, patch panels or other cabling systems provided including cable specifications*

- *Rack power distribution units provided*

- *Electrical supply within each rack, stating the number of electrical connections, current rating (16/32/64 amp) and socket type*
    - *This should include any electrical safety issues which may be addressed by supplier proposals such as electrical phase matching (15 Marks)*

3.2.2 Infrastructure services (IaaS)

This section comprises the IaaS requirements. The aim is to provide a flexible compute and storage platform with a variety of options such as different memory options. This platform should support multiple operating systems based on the i386 architecture. Non i386 based systems should be offered within the complementary services section if applicable.

MR16. .... *JANET(UK) wishes to provide IaaS in a variety of formats to provide flexible provision and a flexible pricing model for Customers. The supplier shall confirm that the IaaS provisions will be made available in multi tenant (Public Cloud), multi tenant usage within the educational sector (Community Cloud) and single tenant (Private Cloud)*

IR17. .... *The supplier shall describe the underlying virtual platform(s) provided based on the following criteria:*

- *Flexibility in terms of operating system compatibility*

- *Management of the environment; tools to provide in and out of band management*

- *How easy it is to move virtual instances within and between cloud environments, e.g. from public to private cloud etc. Estimated time to move instances should be stated if known.*

- *Management of contention; processes in place to manage contention of the underlying IaaS platform*

- *Capacity management; what processes and procedures are in place to scale up the IaaS platform, ideally such that it predicts and pre-empts demand (60 Marks)*

MR18. .... *The supplier shall confirm that a model enabling computing resources to be split between a locally hosted datacentre and the supplier's facility will be provided. This will enable resources to move between the two facilities enabling cloud burst and disaster recovery options.*

IR19. .... *JANET(UK) is concerned that in certain usage models 'rogue' usage such as servers running at 100% CPU for prolonged periods of time would create large unexpected costs. The supplier shall provide information on how this event will be mitigated either by commercial or technical means. (10 Marks)*

IR20. .... *Customers expect to manage (commission and decommission) servers through an online provisioning web portal. This portal should include granular levels of access that enable different access to be given to different users and groups of users. This would enable control at an institutional level but also sub levels such as departmental access. The supplier shall describe the interface to the portal the levels of access and other features. (15 Marks)*

3.2.2.1 Availability monitoring

JANET(UK) expects each supplier to provide a mechanism whereby services offered can be monitored in order that that Customers can see which services are on and offline. There should also be a mechanism for advertising service affecting announcements such as facilities changes and other planned changes to infrastructure.

IR21. .... *The supplier shall describe the availability monitoring tools for the infrastructure and networking provided. Monitoring should be possible on a segmented level, e.g. to view data based on departments or sub departments (5 Marks)*

IR22. .... *The supplier shall describe any integration facilities that it will provide to enable Customers to integrate the supplier owned monitoring tools into their own (5 Marks)*

IR23. .... *The supplier shall describe the mechanism for advertising service affecting announcements such as facilities changes and other planned changes to infrastructure (5 Marks)*

3.2.3 Billing and reporting tools

The move towards cloud based services is aimed at creating a simpler means by which IT can be procured, implemented and charged for. JANET(UK) expects the suppliers to provide a transparent billing model and associated tools for any migration to the cloud in order that each Customer knows what it is consuming with a level of granularity, and can plan for the future based on this.

MR24. .... *The supplier shall confirm that all resources that are used for billing purposes will have online reporting to show the units allocated and/or consumed over the period of the contract. This should include at a minimum any items that billing will be derived from such as number of processors, memory and storage allocated per server.*

IR25. .... *The supplier shall describe the online reporting described in MR24 This should include the aspects that can be monitored and reported on, including the level of granularity. It should also include a means of illustrating the current cost of the services consumed and historical data to provide trend forecasting capabilities. (100 Marks)*

MR26. .... *The supplier must provide electronic or paper based invoicing based on Customer preference.*

3.2.4 Information security

One of the most significant concerns within the use of cloud and datacentre services surrounds the security of the data.

MR27. .... *In accordance with the Data Protection Act, DPA, Customers have obligations to ensure data is managed correctly. The suppliers shall confirm that Customer data will be managed in accordance with the DPA.*

IR28. .... *The supplier shall describe how data security to mitigate physical access to data is managed. (10 Marks)*

IR29. .... *The supplier shall describe the employee related measures in place for both the supplier and corporate partners to ensure data is maintained and adequately secure. This should include any processes in place, and be viewed both from issues caused due to the malicious intent and also accidental issues. The supplier shall describe any training processes which aim to address these issues. (10 Marks)*

IR30. .... *The supplier shall describe how the technical architecture is designed to reduce the risks of data being compromised. This should be provided for all technical architectures employed within the proposal. (25 Marks)*

IR31. .... *The supplier shall describe the processes in place to detect intrusion or potentially compromising events. The supplier shall describe the processes in place when these events occur. This should include communication plans and policies that will ensure that Customers are made aware of issues appropriately and advise of any staff whose major job role includes Information Security. (25 Marks)*

IR32. .... *When required to provide data to external parties in response to incidents, the supplier shall describe the means by which Customers can be assured that their responsibility as the data owner is maintained. In this case data should include both data stored by customers but also data derived from Customer systems such as logfiles and other system based data. (10 Marks)*

IR33. .... *JANET(UK) expects that in any of the shared environment models the Customer may utilise resources that have been used previously. The supplier shall describe the processes in place to prepare compute and storage systems for re-use by a new Customer and prior to equipment disposal. (10 Marks)*

IR34. .... *Security threats are continuously evolving. The supplier shall demonstrate how its organisation maintains its knowledge and best practice including membership or accreditation to recognised security bodies. (10 Marks)*

3.2.5 Technical infrastructure design

JANET(UK) expects services to be reliable and robust. The technical architecture should be designed to ensure that services are robust and resilient and should serve to mitigate both component and larger sub-system element failures.

IR35. .... *The supplier shall state the means by which its technical design addresses the following categories of event. The response should include the triggering event, the mitigation(s) in place, and the expected downtime if any:*

- *Individual element failures, e.g. UPS, hard disk, network switch, electrical failure etc*
- *Logical data corruption, e.g. data deletion*
- *Large scale supplier datacentre failure event, e.g. explosion*
- *Large scale Customer datacentre failure causing it to become inaccessible. This response should relate to the capabilities provided within the cloud and datacentre services proposed as opposed to professional on site fault resolution services (90 Marks)*

IR36. .... *The supplier shall describe the mechanism by which data back ups are performed. This should include information as to the technical infrastructure in place, as well as the length of time the backup data will be retained and the recovery time frame. (10 Marks)*

3.2.6 JANET WAN connectivity

As part of the datacentre proposals the supplier must describe the network connection that will be put in place to connect to the JANET network. This can be achieved using a number of mechanisms.

MR37. .... *The supplier will provide adequate connectivity between the supplier's proposed datacentre facilities and the JANET network to which Customers are connected.*

There are a number of mechanisms by which suppliers can connect to the JANET network:

- JANET Connected[2]
- Public peering; such as utilising LINX
- Other options

IR38. .... *The supplier shall describe how sufficient network connectivity will be provided to Customers. Where relevant this should include information regarding:*

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[2] JANET Connected is an arrangement where a supplier may purchase a connection to JANET over which to provide network based services to JANET Customers. The contract provides various benefits to the supplier in return for a fee. Further details are available from JANET(UK) on request.

- *Connection bandwidth and type*
- *Border Gateway Protocol, BGP [RFC4271]*
- *BGP Autonomous System Numbering (ASN)*
- *IP addressing*
- *Location(s) of connection*
- *Network resilience (50 Marks)*

IR39. .... *The supplier shall state the process by which performance faults relating to network connectivity are processed, including any technical specialists involved and tools used to expedite this process.(25 Marks)*

IR40. .... *The supplier shall describe the process by which JANET will be assisted in diagnosing network faults such as performance issues. This should include:*

- *Access to current technical specification documents such as network topologies including equipment, addressing, etc.*
- *Access to supplier-based equipment diagnostic logs, such as syslog events and port statistics. Access to an appropriate tier of support within the supplier organisation. (25 Marks)*

3.2.7 Disaster recovery

IR41. .... *The supplier shall provide details on how the services proposed will be used to help each Customer to meet the requirement to provide disaster recovery for its local data centre. This could be a variety of services but should be graded into the following categories:*

- *Gold – technology solutions provide a seamless failover from local to cloud based on a time of less than 10 minutes to full service availability*
- *Silver – technology and capacity exist to provide recovery capabilities. These tools require additional intervention which limits recovery time to within a day to full service availability*
- *Bronze – capacity exists to aid in recovery but significant intervention is required such that recovery times are typically greater than 1 day (100 Marks)*

3.2.8 User access management

A major hurdle to cloud service adoption is the potential disjoin between the authentication systems provided within the boundaries of an institution and those within the cloud infrastructure provided. This can lead to the management of multiple user logins and user identities. JANET(UK) is keen to understand how the proposed cloud solutions aim to minimise or overcome these issues and where sector wide national infrastructures such as the UK Access Management Federation and Eduroam can be utilised.

IR42. .... *The supplier shall provide information as to the user access mechanism that will be used by:*

- *users authenticating to operating systems hosted on cloud infrastructure*
- *users authenticating to supplier provided portals and management tools (50 Marks)*

IR43. .... *The supplier shall provide information as to the issues, if any, are caused if Customer owned and managed infrastructure such as directory services are unavailable. The response should assess the impact of this failure and not look to resolve the local failure. (50 Marks)*

3.2.9 Innovation

IR44. .... *The supplier shall demonstrate how its organisation and the proposed solution will tie in with Government ICT strategy and emerging public sector standards such as PSN (10 Marks)*

IR45. .... The supplier shall demonstrate what mechanisms are in place to ensure that Customers have access to the latest products and technology.(15 Marks)

3.2.9.1 Complementary services

IR46. .... Suppliers shall provide information on other products which promote the use of cloud technology, or which reduce the cost of existing local datacentres. Where the supplier offers these services they should be responded to using the following headings:-

- *Services which lower the Customer cost of ownership over a five year period*
- *Services which increase the adoption of cloud services*
- *Services which reduce the time taken to implement a cloud and co-location project*
- *Services which lower capital costs and offset current capital spend (75 Marks)*

3.3 Product marketing and sales

JANET (UK) expects the supplier to promote its product and communicate effectively to potential Customers.

IR47. .... The supplier should describe the product marketing strategy it will use to promote products on this framework in collaboration with JANET(UK). This will include an indication of the effort and capability the supplier proposes to employ. In addition it should highlight any effort or resources required from JANET(UK), resellers or other agents as part of the proposed marketing strategy. (100 Marks)

3.4 Support

JANET(UK) believes that high quality support arrangements are vital for the reliable operation of the cloud services proposed.

3.4.1 Help desk

To provide a high degree of availability for JANET services, it is essential that faults are detected, reported and resolved in the shortest possible time. JANET(UK) requires the supplier to provide a single point of contact for fault management and help desk staff who will manage effectively all reported problems at any time of the day or night, throughout the year.

MR48. .... The supplier shall provide a service that offers a single point of contact for service and support queries. Support must be available 24 hours per day, 365 days per year.

MR49. .... The supplier shall provide Customers operations staff with a means of reporting and tracking the resolution of problems with the service supplied. This reporting system shall be available 24 hours a day, 365 days of a year. The minimum requirement is that it should be possible to report a fault by telephone and that this report be acknowledged and that fault resolution shall commence within 15 minute of the call being placed.

IR50. .... The supplier shall describe how the help desk service will operate. This should include reference to tiering of service, escalation processes, dedicated service management and any call handover procedures such as passing calls between staff shift changes. (70 Marks)

MR51. .... The supplier must confirm that telephone support will be available at national call rates or lower for the duration of a contract under the framework agreement, JANET(UK) would especially welcome a service that allows calls to be made free of charge.

IR52. .... The supplier shall state the call rates of the help desk service number. Suppliers that offer lower call rates will score higher. (10 Marks)

IR53. .... The supplier must explain how the following are managed:

- *ownership of incidents and requests, including classification and prioritisation, and the allocation of a unique identifier, through to full resolution;*

- *regular Customer updates through to final closure and written report (possibly sent by e-mail) of the cause and resolution of the incident;*

- *a comprehensive, effective, documented escalation mechanism to ensure progression of each incident according to its severity; and*

- *provision of access to logfile information as required. (20 Marks)*

3.4.2 Service report and reviews

MR54.. .... The supplier must provide to JANET(UK) reports on the suppliers performance both in respect to support and service levels and also commercially. The reports should be provided as emailed quarterly reports. The reports should contain:

- *Fault management performance; reports including as a minimum the number and nature of the faults incurred during the period, and the time to fix after each fault was reported. The report must include faults reported by individual Customers.*

- *Business reporting; a breakdown summary of the total business gained under the framework for the previous quarter.*

MR55.. .... The supplier must confirm that it will participate in service review meetings at regular intervals, as agreed by JANET(UK) (at least annually), to evaluate performance in line with JANET(UK)'s quality procedures. JANET(UK) will raise concerns on behalf of the customers at these meetings if any complaint regarding poor service quality is received.

3.4.3 Service level agreements

It is important that service level agreements are put in place which clearly set expectations as to what level of service is provided by the supplier. This should be in a form that is easy for customers to understand. Where SLAs are breached it should also be clear what re-dress customers will have.

MR56. .... All products offered within this framework must have SLAs attached to them such that Customers can clearly establish the minimum level of performance.

IR57. .... The supplier shall show how SLA's will be provided and provide an example such as a sample service catalogue. (50 Marks)

MR58. .... The supplier must offer service credits or equivalent, should SLAs be breached

IR59. .... The supplier shall propose how it will provide service credits or similar providing examples (25 Marks)

IR60.. .... The supplier shall provide statistics from its existing Customer base over the past two years to demonstrate the mean time between failures, MTBF. This should be based on statistics derived from services provided to existing Customers rather than through use of theoretical means. (25 marks)

4. CHARGES

4.1 Customer charging

The suppliers shall supply JANET(UK) with a clear set of charging mechanisms. The mechanisms can be a usage based, a flat rate or some other clearly defined scheme. Where a usage based system or other system is employed it should incorporate the use of flat rates and tiered payment with well defined threshold triggers as a means of differentiating usage such that charging is capped. Customers require a clearly understandable usage model which aids predictability and the ability to plan for the future. The proposed usage models will therefore be assessed based on their clarity and ease of understanding.

IR61. .... The supplier shall clearly explain the charging mechanism that it proposes. When employing tiers of usage the usage policy that defines each tier must be clearly stated (10 Marks)

MR62. .... The supplier shall specify the cancellation charges (if any) for early termination of a Customer contract.

Some of our Customers require billing to be split into separate elements so that for example elements such as electricity and departmental use can be invoiced separately.

IR63. .... The supplier shall explain in what manner bills can be subdivided should Customers require it (5 Marks)

All charges, including those for equipment and for the implementation, operation and maintenance of the proposed facilities should be included in the charge.

If JANET(UK) finds it necessary to place some interpretation on any aspect of the total cost, it will seek confirmation of our interpretation with the supplier. Subject to this process, costs that appear elsewhere in the proposal but are not included in the charge will be deemed to have been waived.

Some Customers are able to benefit from preferential pricing for certain items such as software licensing and electricity based on being a public sector body and as educational establishments. Where this is applicable JANET(UK) are keen to see this benefit is reflected in the pricing provided.

IR64. .... The supplier shall describe how the overall cost of the products is kept to a minimum including the following elements:-

- *How infrastructure such as server hardware is bought at economically advantageous pricing*

- *Educational establishments pay a lower rate of VAT, where this applies, demonstrate how this is maintained for qualifying educational establishments*

- *Educational establishments gain preferential educational rates from a number of leading software companies*

- *Other innovations used to keep costs to a minimum such as use of open source software, hardware buy back schemes etc(15 Marks)*

To evaluate charges a set of Use Cases have been defined in the attached spreadsheet and outlined below. These provide models which define potential future uses of services. To establish a benchmark these are evaluated over a three year period. Charges need to reflect the cost benefit of migration away from self managed datacentres to managed facilities and cloud. Where possible this should also demonstrate the benefits of aggregation through Customers working together in groups.

A brief description of these uses cases is provided below:

1. Use Case 1 – Single Customer migrating from co-location to private cloud IaaS (60 Marks)

2. Use Case 2 – Single Customer private cloud IaaS with growth through time (60 Marks)

3. Use Case 3 – Multiple Customers migrating from co-location to community cloud IaaS (60 Marks)

4. Use Case 4 – Single Customer using small scale co-location and public cloud IaaS (10 Marks)

5. Use Case 5 – Use Case 5 – Professional services to engage, audit and design the technical architecture (10 Marks)

IR65. .... The supplier shall provide the charges for the Use Cases specified in this OR. The charges shall include:

- *all installation charges*

- *all charges (installation and otherwise) to move between charging capacity points such as between low usage and medium usage, or equivalent nomenclature ; and*

- *the basis and any assumptions on which recurrent usage charges are made (for example, the cost per virtual server per month). If applicable, the supplier shall state unambiguously exactly how its usage based charging algorithm works.*

- *Licence costs for all aspects of the system up to but not including the Operating System*

The supplier will present the monthly recurrent charges on the Excel spreadsheet provided.

The supplier must complete this spreadsheet with the charges submitted for the Use Cases specified in this OR. The cells into which suppliers are expected to input data are shaded in light blue

All charges shall be provided in sterling and be shown without the addition of VAT.

All charges to Customers shall be included in this response. Any charges not included here will be deemed to have been waived (200 Marks)

4.2 JANET Brokerage sustainability charging

This JANET Brokerage will be sustained by means of supplier contributions. It is anticipated that this will be done in a manner that is linked to Customer adoption of this framework such as to incentivise both JANET(UK) and the supplier to promote this framework for the duration of this agreement.

MR66. .... *The supplier shall provide a mechanism for providing JANET(UK) with sustainability funds for this procurement framework*

IR67. .... *The supplier shall describe the financial mechanism which will support the sustainability of this JANET(UK) procurement framework. JANET(UK) is interested in schemes that are based on orders placed and revenue generated, although other proposals will be considered(70 Marks)*

5. FREEDOM OF INFORMATION (FOI)

While JANET(UK) is not obliged to respond to any requests for information, whether under the Freedom of Information Act (the "FOIA") or otherwise (except where it has a legal obligation for other purposes), we endeavour to respond in the spirit of the FOIA, where we are reasonably able to do so, taking into account the resource implications in preparing a response.

If the supplier considers that any information supplied in its response is either commercially sensitive or confidential in nature, this must be clearly marked and the reasons for the sensitivity given.

In such cases, the relevant material will, in respect of any request for information made by a third party to JANET(UK), be examined in the light of the exemptions provided in the FOIA. However, by virtue of its submission of a Tender, the supplier accepts that the decision as to whether to disclose such marked parts of the Tender will rest solely with JANET(UK).

MR68. .... *The supplier must highlight any information that is either commercially sensitive or confidential in nature and reasons for the sensitivity should be given.*

MR69. .... *The supplier must provide contact details (name, telephone number and email address) of the person within its organisation that is responsible for dealing with FOI requests.*

6. RECORD RETENTION

By submitting a tender response to this procurement, a supplier accepts that JANET(UK) will keep a copy of the tender and all other documentation and correspondence received from the supplier relating to this procurement for seven years. JANET(UK) will keep this information in order to maintain the records required for audit purposes. At the end of the seven year period JANET(UK) will destroy any information that it holds relating to this procurement.