Defence Research and
Development Canada

Recherche et développement
pour la défense Canada

DEFENCE **R&D** DÉFENSE

Enterprise Linux licenses

A comparison of licenses between Red Hat and Suse Enterprise Linux

R. Carbone
DRDC Valcartier

Defence R&D Canada – Valcartier
Technical Note
DRDC Valcartier TN 2006-573
October 2006

Canada

Enterprise Linux licenses

A comparison of licenses between Red Hat and Suse Enterprise Linux

R. Carbone
DRDC Valcartier

Defence R&D Canada – Valcartier

Principal Author

Richard Carbone
Programmer/Analyst

Approved by

Yves van Chestein
Head/information Knowledge Management Section

Norbert Haché (DMSS)

Abstract

The Canadian Navy's Directorate of Maritime Ship Support in Summer 2005 asked DRDC Valcartier to look at various support options if Linux were to be implemented as the Navy's new Halifax-class frigate C2 operating system [1]. This task was undertaken by senior defence scientist Mr. Robert Charpentier and his team. In Autumn 2005, the Navy requested that Mr. Charpentier and his team also briefly explore the license differences between two very popular Linux operating systems: Red Hat Enterprise Linux and Novell Suse Enterprise Linux. The goal was to have a simple, easy to understand and non-legal interpretation of the two licenses and conclude what, if any, particular impact either license could have over the possible implementation of Linux.

This page intentionally left blank.

Executive summary

Enterprise Linux licenses: A comparison of licenses between Red Hat and Suse Enterprise Linux: A comparison of licenses between Red Hat and Suse Enterprise Linux

Carbone, R.; DRDC Valcartier TN 2006-573; Defence R&D Canada – Valcartier; October 2006.

The Navy's Directorate of Maritime Ship Support (DMSS), under the auspice of the Halifax Modernization Command Control System (HMCCS) project, requested that DRDC Valcartier perform an evaluation of Linux licenses. Specifically, the goal was to examine the End User License Agreements (EULA) of two popular very popular enterprise-class Linux distributions and discern which would be better suited to the specific needs and requirements brought forth by a study that DRDC Valcartier was preparing for DMSS concerning various Linux support options [1].

After extensively analyzing the requirements of [1], and performing an in-depth analysis of the two EULA's required by [1], it was found that the Novell Suse Enterprise Linux (NSEL) EULA was slightly more conducive to the needs of the HMCCS project than that of Red Hat. Both were approximately equal, however. The Red Hat Enterprise Linux (RHEL) EULA is vaguer. Its text is unnecessarily longer, and in general, it leaves more wiggle room either for Red Hat to break the contract as per the EULA or for the customer to cause a contract breach. However, neither license places the Department of National Defence (DND) or the Government of Canada (GoC) in any real or perceived legal jeopardy.

The implication is such that for the purposes of the HMCCS project, either EULA could be used as they are essentially the same and permit the customer to make modifications to the underlying components that are respective of their own copyrights and/or licenses and that are not considered as the vendor's proprietary intellectual property (IP). This is good as the HMCCS project is planning for the system's long-term maintenance needs, the Linux kernel and core components might need to be changed or modified over the years, depending on the specific support option chosen by DMSS [1].

However, should any source code be changed, as is permissible, it is still unknown how this will affect the redistribution of source code back to the open source community. GoC and DND do not yet have a policy for this specific issue. For most projects, this may not be too big of a concern. However, this is not an acceptable situation where classified projects are concerned. In such cases, the legal issue of source code redistribution must be weighed by legal counsel due to the implications of the National Defence Act [2] and implications of laws on National Security [3] [4] [5].

This page intentionally left blank.

Table of contents

Acknowledgements

1.   Analyses of Linux EULA

1.1   Disclaimer and seeking legal counsel

The views set forth are solely those of the author and are not meant in any way to deter any GoC department/agency from choosing or using one given Linux distribution over another. It was also not the intention to unfairly promote the usage of one EULA over another.

The opinions set forth in this paper are not legally binding. They should not be considered either the official or legal position of the GoC, DND, or DRDC. Furthermore, these opinions should not be construed as legal advice and should never be considered as a substitute for adequate legal counsel. In general, legal counsel for the GoC and DND must is the Department of Justice (DOJ). These can also include its affiliate regional offices across the country.

Caveat emptor. One always purchases software at one's own risk. The same applies to the type of EULA that an organization or individual chooses to place onto a given software package that is either sold or distributed. EULA's vary from software product to product, company to company. The end goal of the EULA is always to break down the responsibilities of the party that wrote/owns the software and the party that purchases/uses the software. Whether a EULA can trump underlying software licenses such as GNU GPL is another question altogether. The problem with EULA's are that in general, by using the software the EULA is considered automatically accepted.

Determining whether it is legal to modify or change core open source software components governed by a given EULA is a matter that should be discussed with legal counsel. Furthermore, legal counsel should also be sought when determining whether certain software components that are governed by their own software licenses such as the GNU GPL license require that modifications to the source code base be redistributed back to the open source community. It is absolutely imperative that legal counsel be sought out when determining the impact of source code redistribution under the auspices of a classified project and whether redistribution would violate any DND [2] and National Security laws and policies [3] [4] [5].

These and all other legal questions are the responsibility of the party that will purchase/deploy the software. It is the party's duty to understand its rights regarding the EULA and any other software licenses.

1.2   Brief introduction

As requested by the Navy's Directorate of Maritime Ship Support (DMSS) under the auspice of the Halifax Modernization Command Control System (HMCCS) project, DRDC Valcartier had to render an opinion about the EULA's of two very popular enterprise-class distributions of Linux. The HMCCS project is a Command & Control (C2) hardware and software upgrade currently being examined by the Navy for deployment on the newly retrofitted Halifax class frigate.

The in-depth analysis found in [1] details the various long-term support maintenance strategies necessary for the maintenance of a C2 operating system (e.g. Windows, Linux, and UNIX). The

Navy was seriously considering the possible adoption of Linux as the new C2 operating system aboard the frigates, replacing the existing HP-UX operating system. However, the EULA of various enterprise-class Linux operating system distributions varies from vendor to vendor and product to product. The most likely candidates would be North American candidates, and these would be Red Hat Enterprise Linux (RHEL) and Novell Suse Enterprise Linux (NSEL). However, portions of their EULA's are radically different from one another. Other portions are relatively standard across the industry, at least when compared to other commercial software EULA's.

Thus, this document highlights and compare the main differences between these two EULA's and present them in an easy to understand manner that was free of legal and technical jargon. It also makes any necessary conclusions that could affect the purchase and deployment of both Linux operating systems.

1.3   Analyses and summary

The following views are based on interpretations of the facts as presented via the vendor's EULA as well as any possible ramification or other potential impact that these EULA's may contain or express (implicitly or explicitly). The assessments are based on the RHEL EULA [6] and the NSEL EULA [7].

The assessments have been broken down according to the specific EULA in question. The main points of interest have been pulled out from the respective EULA for comparative purposes such that the reader may learn the main differences between these EULA's. The points themselves have been broken down into point form to allow for easier reading and comparison between the EULA's.

The objective of this section is only to pull some of the major points from both EULA's. A more comprehensive comparison can be found in Section 1.4.

1.3.1   Brief Analysis of the Red Hat Enterprise Linux EULA

- The RHEL license is only renewable on a yearly basis to remain valid. Otherwise, the license is no longer considered valid, and thus support is no longer provided and its usage is no longer permitted.

- RHEL is pre-bundled with support services and cannot be purchased without it. It appears as though the support services (including upgrades, patches, and fixes) are an integral part of the EULA.

- Acceptance of the license grants Red Hat the automatic right and privilege to come and verify the customer's facilities to verify if the customer complies with the number of purchased licenses to the number of systems deployed. Furthermore, the EULA sets the stage for monetary compensation if it finds that an individual/organization has been using non-licensed copies of RHEL.

- The license is non-transferable to other parties (this would appear to go against Canadian and International copyright laws). All licenses purchased by the customer become invalid if they are at some point in the future transferred over to a subsequent party.

> → Paid leased licensed IP (a Linux distribution is licensed IP) is generally transferable to subsequent parties if all expenses and costs already have been paid for at the time of purchase and/or prolongation of maintenance/support. To do otherwise could be skirting with anti-monopoly laws found in the U.S. Canada to date has no anti-monopoly legislation.

- The EULA does not specifically mention the ongoing Linux IP lawsuit (this is important due to the ongoing lawsuit of SCO vs. IBM, SGI, Novell, Red Hat, and other parties). All responsibilities are placed on the shoulders of the customers. A web search reveals that Red Hat offers direct customer indemnification.

- Almost all of the RHEL software is open source and as such, the source code is freely available. Red Hat acknowledges that the underlying software components are respective of their authors as is their IP. However, the exact wording of the RHEL EULA leaves the reader with a sense of vagueness. Red Hat does not attempt to limit the IP of the underlying software components upon which the "Software" is based on.

- Red Hat makes reasonable efforts to protect the customer's information (includes proprietary, non-technical and business related information) for a period of at least two years from the effective date of the termination of the contract.

- Purchasing the license is the same as purchasing the right to use. Furthermore, it is the same as purchasing a one-year basic software maintenance subscription, renewable automatically every year.

- The United Nations Convention on the International Sale of Goods cannot be applied to the RHEL license agreement.

- Each system running RHEL must be licensed; this means that there can be no discrepancies between the number of machines supported under contract and the number of machines deployed (i.e. run everywhere, license only one copy).

- Red Hat claims all RHN code as its own proprietary work, yet the extent to which it may have been influenced directly/indirectly by works derived from other licensed/copyrighted open source software that are respective works of their own authors is unknown.

- The customer has very limited redress against Red Hat in the event of a dispute. However, cases can always be filed in U.S. court.

- The software is subject to export control restrictions under the US Commerce Department list of excluded countries.

- Red Hat states that it may redistribute third-party software with RHEL. However, Red Hat makes no effort in differentiating to the customer which portions of RHEL constitute original Red Hat IP and which do not.

- Red Hat can elect not to support kernel-related issues.

- All support is a best effort. If a system is broken due to customer fault then no support can be expected (fair enough!). Furthermore, Red Hat will only provide support on supported hardware and platforms.

- The various levels and types of support are very well laid out.

1.3.2   Brief Analysis of the Novell Suse Enterprise Linux EULA

- The NSEL EULA allows the customer to install unlimited copies of NSEL. However, the customer will only receive support for actually licensed systems currently under contract support via a subscription.

- The license is non-transferable to other parties (this would appear to go against Canadian and International copyright laws). All licenses purchased by the customer become invalid if they are at some point in the future transferred over to a subsequent party.

> → Paid leased licensed IP (a Linux distribution is licensed IP) is generally transferable to subsequent parties if all expenses and costs already have been paid for at the time of purchase and/or prolongation of maintenance/support. To do otherwise could be skirting with anti-monopoly laws found in the U.S. Canada to date has no anti-monopoly legislation.

- The EULA does not specifically mention the ongoing Linux IP lawsuit (this is important due to the ongoing lawsuit of SCO vs. IBM, SGI, Novell, Red Hat, and other parties). All responsibilities are placed on the shoulders of the customers. A web search reveals that Novell does offer customer indemnification against SCO[1].

- Novell does not claim to be the owner of the IP of NSEL or limit or restrict the underlying copyrights and licenses pertaining to the IP for the software components of which NSEL is composed.

- The United Nations Convention on the International Sale of Goods cannot be applied to the NSEL license agreement.

- Novell leaves it up to the customer to work out license disagreements with the actual holder of the copyright/license for a given piece of software. Novell only claims that NSEL is a packaged product for customer use and that it owns only the copyright for the packaged product itself and not the copyright/IP for the underlying software components unless otherwise stated.

---

[1] See http://www.novell.com/licensing/indemnity/register/index.html for more information.

- It is important to note that the NSEL EULA states very clearly that the underlying operating system is not designed for, nor certified, nor warranted for use in mission-critical systems/ environments/applications.

- The software is subject to export control restrictions under the US Commerce Department list of excluded countries.

- By accepting the NSEL EULA, the customer agrees that Novell reserves the right to refuse permission to the customer in releasing any information compiled about any benchmarks or other performance comparisons or evaluations. In other words, the customer must receive consent from Novell before publishing any results.

- The type and level of support are not laid out at all. Novell can decline customer support and makes no guarantee about the type of support to be expected or the effectiveness of said support. Furthermore, Novell makes little claim about which hardware and platforms are supported.

- The possibilities of redress against Novell are uncertain. They only mention a vague warranty and the possibility of a maximum refund of 1.25 times the value of the software (or US$50 if the customer received the software freely.)

1.4   Synthesis

While Section 1.3 is a brief point-form summary of the two EULA's, this section makes a more comprehensive examination and comparison of the two EULA's in the form of Table 1 below.

Table 1: Synthesis of Section 1.3

Number	Subject	RHEL EULA	NSEL EULA
1	Maintenance and support are provided on a subscription-only basis	Yes	Yes
2	Support must be purchased with the software (support and software bundled as together and inseparable)	Yes	No
3	Every system running the operating system must be licensed	Yes	No
4	To receive support, each system must be licensed	Yes	Yes
5	Yearly maintenance and support subscriptions must be renewed annually to maintain the right to use the "Software"	Yes	No
6	If late with subscription renewals, there are financial penalties	Yes	No

7	There are financial penalties for using unlicensed software	Yes	No
8	The customer is forced to accept the license agreement to use the software	Yes	Yes
9	Reasonable Limited Warranty	Yes	Yes
10	Clearly written and easily understood EULA	No	Yes
11	The contract, as set out in the EULA, is easy to terminate or walk away from (this can include penalties or time periods)	No	Yes
12	Grants licensor[2] the right to verify customer's site for license compliance	Yes	No
13	Grants end-user the right to transfer the license and software to another party	No	No
14	The EULA makes a guarantees about support, quality of support, the resolution or the ability to resolve customer support-related issues	Yes	Yes
15	The levels and types of support are well laid out in the EULA	Yes	No
16	Vendor may decline customer kernel-related support	Yes	N/A
17	Vendor will support only on supported hardware and platforms	Yes	N/A
18	EULA supersedes all underlying licenses and agreements	No	No
19	Customer indemnification from SCO and other legal issues are in place if software is purchased with support contract	No	Yes
20	The terms of redress against the vendor are stated	Yes	No
21	Vendor claims underlying software components' IP as its own	No	No
22	Vendor claims compiled binaries as its own IP	No	No

---

[2] Licenses cannot be bought, only leased through license payment.

DRDC Valcartier TN 2006-573

23	Vendor claims "Software[3]" as its own IP	Yes	Yes
24	Makes mention that underlying software and IP is respective of its own authors and their own respective licenses and agreements	Yes	Yes
25	Limits the applicability of the underlying IP	No	No
26	Guarantees the protection of customer information (at least 2 years after contract termination)	Yes	No
27	The international agreement on "United Nations Convention on the International Sale of Goods" applies to software	No	No
28	Subject to Export Control	Yes	Yes
29	Allows the customer to make significant changes to core operating system components (i.e. kernel, drivers, etc.) such that it the changes will significantly alter or affect the system's behaviour or stability	No	No
30	Allows end-user to modify or replace individual open source components that are respective of the their license agreements	Yes	Yes
31	Vendor reserves the right to censor the publication of performance/benchmark metrics	No	Yes
32	Clearly states "Software" not designed for mission critical systems and mission critical disclaimer	No	Yes
33	License disagreements concerning underlying software components to be worked out by customer[4] (i.e. GPL license goes against company policy – this is the customer's problem to work out, not the vendor's)	Yes	Yes

---

[3] "Software" consists of the bundled packages in binary format that form the operating system in its entirety.

[4] Because neither Red Hat nor Novell claim the underlying IP as their own and acknowledge that the components are respective of their creators and their applicable licenses, the vendors are not responsible for license disagreements concerning the underlying software.

2. Conclusion and recommendations

It is currently yet unknown if the Navy will proceed with the adoption of Linux as the new C2 operating system for the HMCCS project. Moreover, even if it were, it is not known which distribution will be chosen.

In general, the two EULA's are basically the same. While Red Hat's is much lengthier and wordier than Novell's, the essence of each can be seen in the other. They both allow the end-user to modify the majority of the components of the operating system, respective of the underlying copyright and/or license of a given component. However, Novell's EULA is by far clearer than Red Hat's on the issue. The meaning is the same; however, the semantics are not. Only after a long analysis of the semantics can it be seen that they are stating the same thing.

Where they differ is largely on the issue of support. Red Hat requires that support be purchased via a yearly subscription for a given license and it must be renewed annually in order to maintain the right to use that license. Novell's approach is different. If the license is not purchased then no support is provided. For Novell, support is purchased outside of the license purchase.

In the end, both licenses are suitable for the needs of DND and GoC. However, for the specific needs of the HMCCS project, this is a difficult matter to determine. Nevertheless, it would appear as if, at least on the side of cost savings (long-term), that Novell's distribution should be more favourable because the distribution can be experimented with without having to pay for it. If support is provided in-house [1] then the only significant cost is the one time license purchase. Moreover, by using a clearer definition of user rights and entitlements, it is less likely to cause confusion down the road. Furthermore, if the license agreement turns out to be unfavourable, then walking away from the contract is simpler than with Red Hat.

However, because the Navy may consider making changes directly to the kernel itself [1] in a context that may be classified, this brings up another legal matter when considering the requirements of the GPL license requirement and how changes must be re-contributed back to the community.

DND and the GoC can get around this issue by instituting a policy or law that would specifically exclude re-contributing back any code modifications to the open source community if any of the derivative works stemmed from classified work. However, this would require substantial work. At this point in time, while the divulgation of classified information to the community at large is illegal, the governing laws were not designed to deal with the issues surrounding source code redistribution and must be addressed in the short-term.

References

[1] Charpentier, Robert, Richard Carbone. Life-Cycle Support for Information Systems Based on Free and Open Source Software. Revision 1.0. DRDC Valcartier. Technical Paper for 11th ICCRTS. June 2006. http://www.dodccrp.org/11th_ICCRTS/abstracts/136.pdf.

[2] The National Defence Act. http://lois.justice.gc.ca/en/N-5/text.html.

[3] The Anti-Terrorism Act. Bill C-36. Canadian Law. http://www.parl.gc.ca/37/1/parlbus/chambus/house/bills/government/C-36/C-36_3/C-36_cover-e.html.

[4] The Security of Information Act. Canadian Law. http://lois.justice.gc.ca/en/O-5/text.html.

[5] The Public Safety Act. Canadian Law. http://laws.justice.gc.ca/en/P-31.5/text.html.

[6] Red Hat. Red Hat End Linux End User License Agreement. Revision 3.0. Red Hat. End User License Agreement. https://www.redhat.com/licenses/rhel_us_3.html.

[7] Novell. Novell Suse Enterprise Linux End User License Agreement. Revision 9.0. Novell. End User License Agreement. http://www.novell.com/licensing/eula/sles_9.pdf.

[8] Regents of the University of California. The BSD License. Open Source Initiative for the University of California. License. http://www.opensource.org/licenses/bsd-license.php.

[9] Free Software Foundation. The GNU GPL License. Version 2. Free Software Foundation. License. 1991. http://www.gnu.org/licenses/gpl.txt.

This page intentionally left blank.

Annex A   End User License Agreements

A.1   Red Hat Enterprise Linux EULA

Subscription Agreement

This Subscription Agreement (the "Agreement") is between Red Hat, Inc. ("Red Hat") and any purchaser or user ("Customer") of Red Hat products and services that accepts the terms of this Agreement ("Customer").

PLEASE READ THIS AGREEMENT CAREFULLY BEFORE PURCHASING OR USING RED HAT PRODUCTS AND SERVICES. BY USING OR PURCHASING RED HAT PRODUCTS OR SERVICES, CUSTOMER SIGNIFIES ITS ASSENT TO THIS AGREEMENT. IF YOU ARE ACTING ON BEHALF OF AN ENTITY, THEN YOU REPRESENT THAT YOU HAVE THE AUTHORITY TO ENTER INTO THIS AGREEMENT ON BEHALF OF THAT ENTITY. IF CUSTOMER DOES NOT ACCEPT THE TERMS OF THIS AGREEMENT, THEN IT MUST NOT USE OR PURCHASE RED HAT PRODUCTS AND SERVICES.

The Effective Date of this Agreement is the earlier of the date that Customer accepts this Agreement or the date that Customer uses Red Hat's products or services.

I. Terms and Conditions

A. GENERAL TERMS AND CONDITIONS

The term "Services" as used in this Agreement means, collectively, the Support Services provided under the purchased subscription and defined herein, RHN Services as defined herein, and any Learning Services purchased under this Agreement and defined herein. The term "Software" means the subscription for the family of software products purchased under this Agreement and defined herein, if any. The term "Installed Systems" means the number of Systems on which Customer installs or executes the Software. The term "System" means any hardware on which the Software is installed, which may be, without limitation, a server, a work station, a virtual machine, a blade, a partition or an engine, as applicable. The initial number of Installed Systems is the number of copies of the Software that Customer purchases. The parties agree that the terms of this Agreement will govern future purchases by Customer of Red Hat's products and services unless otherwise agreed by the parties in writing.

1. TERM AND TERMINATION

1.1 Term. The term of this Agreement shall be for the duration of all Services provided under this Agreement. The initial term for Services shall commence on the Effective Date of this Agreement and shall continue for a period of one (1) year unless a different term is specified by the parties at the time of purchase. Thereafter, the term for Services shall renew for successive terms of one (1) year each unless a different term is agreed to by the parties at the time of renewal and unless either party gives written notice to the other of its intention not to renew at least sixty (60) days prior to the commencement of the next term; provided, however, Customer shall have the right to terminate this Agreement at any time after the first year by giving sixty (60) days prior written

notice of termination to Red Hat. Customer shall remain obligated for all fees through the date of termination.

1.2 Termination for Breach. Red Hat may terminate this Agreement (a) in the event Customer fails to pay an invoice when due, (b) in the event Customer commits a material breach of this Agreement and fails to remedy that breach within thirty (30) days of receipt of written notice of material breach, or (c) as otherwise provided in this Agreement. Customer may terminate this Agreement in the event Red Hat commits a material breach of this Agreement and fails to remedy that breach within thirty (30) days of receipt of written notice of material breach.

2. PRICING, INVOICING AND TAXES. Customer agrees to provide Red Hat with accurate and complete billing information (including legal name, address, telephone number, and billing or credit information). Customer will report to Red Hat all changes to this information within thirty (30) days of the change. Red Hat reserves the right to suspend or cancel Services for non-payment. All fees are stated and must be paid in United States Dollars. If Customer is paying by credit card, then Customer authorizes Red Hat to bill Customer's credit card for the Services for the initial term and for the amount due at the time of renewal. If Red Hat has approved Customer to be invoiced, then Red Hat will invoice Customer for the total fees at the time of execution of this Agreement, and payment shall be due within thirty (30) days of the invoice date and any additional fees shall be due within thirty (30) days of the invoice date. All prices and rates quoted by Red Hat are exclusive of any foreign, federal, state, or local sales, excise, use, or similar taxes. Customer agrees to pay all such taxes, when applicable, regardless of whether such taxes are originally charged on Customer's credit card or appear on Red Hat's original invoice, or are later levied on Red Hat or Customer by a taxing authority, excluding any taxes levied solely on the net taxable income of Red Hat. Any renewal of this Agreement will be at Red Hat's list prices in effect ninety (90) days prior to renewal; provided, however, the first such renewal shall be at the same price per Installed System paid during the initial term.

3. PAYMENT. Except in the case of breach of this Agreement by Red Hat or termination of this Agreement as provided in Section 1.1 hereof, any and all payments of amounts due under this Agreement are non-refundable. In the event Customer fails to make payment to Red Hat in the manner provided by this Agreement, Red Hat's remedies include (a) suspending Services until Red Hat receives full payment from Customer for all fees, including late fees and interest, due, or (b) terminating this Agreement without notice.

4. REPORTING AND AUDIT. If Customer wishes to increase the number of Installed System, then Customer will purchase from Red Hat additional Services for each additional Installed System. During the term of this Agreement and for one (1) year thereafter, Customer expressly grants to Red Hat the right to audit Customer's facilities and records from time to time in order to verify Customer's compliance with the terms and conditions of this Agreement. Any such audit shall only take place during Customer's normal business hours and upon no less than ten (10) days prior written notice from Red Hat. Red Hat shall conduct no more than one such audit in any twelve-month period except for the express purpose of assuring compliance by Customer where non-compliance has been established in a prior audit. Red Hat shall give Customer written notice of any non-compliance, and if a payment deficiency exists, then Customer shall have fifteen (15) days from the date of such notice to make payment to Red Hat for any payment deficiency. The amount of the payment deficiency will be determined by multiplying the number of underreported Installed Systems or Services by the annual fee for such item. If Customer is found to have

underreported the number of Installed Systems or amount of Services by more than five percent (5%), Customer shall, in addition to the annual fee for such item, pay liquidated damages equal to twenty percent (20%) of the underreported fees for loss of income and administration costs suffered by Red Hat as a result.

5. NON-TRANSFERABLE. This Agreement, and all Services provided by Red Hat pursuant to this Agreement, may not be transferred, assigned or distributed without the prior written consent of Red Hat. Any attempted transfer, assignment or distribution without Red Hat's prior written consent shall terminate this Agreement, and Red Hat shall have no further obligation hereunder.

6. WARRANTY (6.1) During the term or any renewal of this Agreement, if (a) any portion of the Software is found to infringe any third party intellectual property rights, and (b) Customer has registered the Software with Red Hat, then with respect to each Installed System for which Customer has paid, Red Hat will, at its expense and option: (i) obtain the right for Customer to continue to use the Software consistent with this Agreement; (ii) modify the Software so that it is non-infringing; or (iii) replace the infringing component with a non-infringing component. (6.2) To the maximum extent permitted by applicable law, except as specifically stated in this Agreement, the Software, the Services, and any software program provided by means of RHN, any Proxy Server, Satellite, or the RHN Code (each as defined herein) are provided and LICENSED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO THE IMPLIED WARRANTY OF MERCHANTABILITY, NON-INFRINGEMENT AND FITNESS FOR A PARTICULAR PURPOSE. RED HAT DOES NOT GUARANTEE THAT THE USE OF THE SOFTWARE, SERVICES, OR THE PROXY SERVER, SATELLITE, OR THE RHN CODE (EACH AS DEFINED HEREIN) WILL NOT BE INTERRUPTED OR ERROR FREE.

7. LIMITATION OF LIABILITY. Neither party shall be in breach of this Agreement due to failure of performance that arises out of causes beyond its reasonable control. To the maximum extent permitted by applicable law, IN NO EVENT WILL RED HAT BE LIABLE TO CUSTOMER OR ANY THIRD PARTY FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, WHETHER IN TORT OR IN CONTRACT, INCLUDING LOST PROFITS, LOST SAVINGS OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING UNDER THIS AGREEMENT OR RED HAT'S PERFORMANCE INCLUDING WITHOUT LIMITATION (A) THE SOFTWARE, THE SERVICES, THE PROXY SERVER, SATELLITE, OR THE RHN CODE (EACH AS DEFINED HEREIN) (B) ANY INTERRUPTION OF USE OF RHN, THE SOFTWARE, OR THE PROXY SERVER, SATELLITE, OR THE RHN CODE (EACH AS DEFINED HEREIN) OR (C) FOR LOSS, INACCURACY OR CORRUPTION OF DATA, EVEN IF RED HAT HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT SHALL RED HAT'S LIABILITY HEREUNDER EXCEED THE AMOUNT THAT CUSTOMER PAID TO RED HAT UNDER THIS AGREEMENT DURING THE PREVIOUS TWELVE MONTHS.

8. CONFIDENTIALITY. Customer and Red Hat agree to maintain the confidentiality of the proprietary information received by the other party including non-public technical and business information for a period of two (2) years after the termination of this Agreement. Red Hat's pricing and product roadmap are Red Hat's confidential information. This section shall not apply to any publicly available or independently developed information.

9. ENTIRE AGREEMENT. This Agreement shall constitute the exclusive terms and conditions with respect to the purchases of Software and Services under this Agreement by Customer from Red Hat, notwithstanding any different or additional terms that may be contained in the form of purchase order or other document used by Customer in such transactions. This Agreement contains the final, complete and exclusive statement of the agreement between the parties with respect to the transactions contemplated herein and all prior written agreements and all prior and contemporaneous oral agreements with respect to the subject matter herein are merged herein including any Subscription Descriptions and Subscription Purchase Terms. This Agreement may not be amended, supplemented or modified (or any right or power granted hereunder waived) except by written instrument signed by authorized officers of the parties hereto (or in the case of a waiver, signed by the party to be bound), which instrument makes specific reference to this Agreement.

10. GENERAL. (10.1) This Agreement shall be governed by and construed in accordance with the substantive laws of the State of North Carolina, U.S.A., without regard to choice of law provisions, except that the United Nations Convention on the International Sale of Goods shall not apply. The parties each agree that they are subject to the personal jurisdiction of the state and federal courts within the State of North Carolina, and each waives the right to challenge the personal jurisdiction of those courts over it. (10.2) Each party warrants that the person signing or accepting this Agreement is authorized to bind said party. (10.3) If one or more of the provisions contained in this Agreement is held invalid, illegal or unenforceable in any respect by any court of competent jurisdiction, such holding will not impair the validity, legality, or enforceability of the remaining provisions. (10.4) Failure or delay on the part of any party to exercise any right, remedy, power or privilege hereunder will not operate as a waiver. (10.5) Any provision of this Agreement which may be reasonably expected to survive the termination of this Agreement, including, but not limited to, Sections 6.2 and 7, shall survive such termination. (10.6) Red Hat may supply Customer with technical data that is subject to export control restrictions. Red Hat will not be responsible for compliance by Customer with applicable export restrictions or obligations for such technical data. Each party agrees to comply with any applicable export control laws or regulations. (10.7) Any notice to be given pursuant to this Agreement, including any notice of change of address for notice, shall be deemed given when sent to Red Hat to General Counsel, Red Hat, Inc., 1801 Varsity Drive, Raleigh, NC 27606 or by facsimile to 919-754-3704 and to Customer at the address or facsimile number indicated at the time of purchase: (a) three (3) business days after being deposited with the U.S. Postal Service, postage prepaid, first class, certified, return receipt requested; (b) upon receipt when delivered in person; (c) two (2) business days after being deposited with a reputable international overnight delivery service; or (d) one (1) business day after being transmitted by facsimile with confirmation of delivery to the number for such party set forth in this Agreement. (10.8) In the event of a dispute between the parties regarding payment under this Agreement, the non-prevailing party shall pay the reasonable attorney's fees of the prevailing party.

II. Support Services Service Levels

A. SUBSCRIPTION TERMS AND CONDITIONS

Red Hat will provide the purchased subscription(s) subject to the following terms.

1. DEFINITIONS:

"Platform" means the combination of the CPU and other hardware a computer system uses, its exact operating system including the version number, the compiler required, the type of libraries (e.g. libc, glibc), and the type of crypto library available (e.g. libcrypt, pam). Changes to any of these components which break binary compatibility, or prohibit functioning (including recompiling) of software, unless modified by Red Hat, constitute a different platform and may disqualify it from receiving Support Services. Should a platform be discontinued during the term of this Agreement, Red Hat will have the option to continue supporting Customer on that platform or to issue Customer a pro-rata refund.

Red Hat Network ("RHN") is the collection of services and technology related to software delivery, updates and upgrade, management, and provisioning for systems running Red Hat Enterprise Linux.

"Software" means the software purchased under this Agreement, which is provided under Red Hat's trademarks and is subject to the applicable end user license agreement.

"Support Services" means the support services provided with the purchased subscription as further defined in this Agreement.

"Supported Hardware or Platform" means hardware or a platform that functions with the Software and components contemplated for use with the Software. Information regarding the Red Hat supportability status of hardware systems and components, as revised from time to time, can be found at http://hardware.redhat.com/hcl. Additional Red Hat support policies that apply to the Support Services may be viewed at

http://www.redhat.com/services/techsupport/production/GSS_policy.html.

2. CUSTOMER OBLIGATIONS

2.1 Entitlement. In order to access and utilize Support Services, Customer will be required to provide Red Hat with its Customer number, RHN machine name or RHN system ID at the time of initiating the Support Service.

2.2 Customer's Computer System. Customer will be responsible for performing operations on Customer's computer system and Red Hat shall have no responsibility to perform operations on Customer's computer system. Customer acknowledges that Red Hat's ability to perform certain Support Services may be conditioned upon access to certain Customer information and access to Customer's computer system as reasonably requested by Red Hat. Such information may include, but is not limited to, the type of hardware Customer is using, a description of the problem for which Customer seeks Support Services, and additional software Customer is using that falls outside the Support Services scope of coverage. Customer understands and agrees that the completeness and accuracy of the information Customer provides to Red Hat may affect Red Hat's ability to provide Support Services. The Support Services purchased by Customer are intended for use only for the benefit of the Customer and only for the Installed Systems with

subscriptions. Customer may not use one subscription for Services for more than one Installed System. Any unauthorized use of the Services will be deemed to be a material breach of this Agreement.

2.3 Designated Customer Contact. Red Hat will provide Support Services to Customer only by communication with the Customer's designated technical contact or contacts (the "Contact"). Customer is entitled to the number of Contacts set forth in the Customer Contacts table on Schedule II. Customer may purchase additional Contacts for a fee. Customer shall use commercially reasonable efforts to maintain consistent Contacts during the term of this Agreement. Customer may not use a single Contact to act as a mere forwarding service for other personnel. The Contact may not use Support Services on the basis of this Agreement to benefit any person or entity other than the Customer. Each Contact must have read and/or write access to all necessary files. Each Contact must have English language communication skills and the relevant technical knowledge necessary to assist Red Hat in performing the Support Services contemplated under this Agreement. This knowledge includes familiarity with the Software and the Supported Hardware or Platform.

2.4 Support Portal. Customer may initiate Support Service requests through the web-based support portal located at Red Hat's main web site, http://www.redhat.com/apps/support. The Contact(s) are entitled to open a secure login to the support portal and use the ticket manager application to submit a Support Service request for any covered Support Service. Each submitted Support Service request is given a unique identification number. Support Services logged through the support portal are managed using the English language.

B. SERVICE LEVELS FOR SUBSCRIPTIONS

1. Red Hat Network Proxy Server and Satellite. If Customer subscribes to RHN Proxy Server or Satellite ("Proxy Server" or "Satellite") as an upgraded delivery method to RHN, then the following provisions apply to that subscription. To provide Proxy Server or Satellite, the Proxy Server and/or Satellite code (the "RHN Code") will be installed onto one or more designated servers owned or leased by Customer, approved by Red Hat and located at Customer's site or provided by Red Hat (the "RHN Servers") solely for the purpose of allowing Customer to receive the RHN Service during the period that the Customer subscribes to RHN Service (the "Subscription Period"). Customer may use the RHN Code only on the RHN Servers and, upon Red Hat's written approval, on one additional server for backup purposes. Customer may use the RHN Code only to receive the RHN Services for systems for which Customer has purchased a subscription for RHN Service. Customer may not use the RHN Code for any other purpose. Customer may not transfer or assign the RHN Code or any media containing the RHN Code. Customer may not modify, copy, make derivative works of, distribute, reverse engineer, decompile or export the RHN Code. During the Subscription Period, Customer agrees that Red Hat shall have such electronic or physical access to the RHN Servers as Red Hat reasonably requests to enable Red Hat to deliver the RHN Service and to update or enhance the RHN Code as Red Hat deems necessary, in its sole discretion.

The RHN Code and any physical media containing the RHN Code and all intellectual property rights contained therein, and all copies thereof made by Customer (if authorized by Red Hat) are the exclusive property of Red Hat and a valuable trade secret of Red Hat. Upon termination of the subscription, Customer immediately will destroy all copies of the RHN Code in its possession

(including any RHN Code installed on the RHN Servers). The RHN Code (and any media containing the RHN Code) is the confidential property of Red Hat and Customer shall not use or disclose any information regarding the RHN Code, except as permitted by this Agreement. If Red Hat provides the RHN Server to Customer, Customer must promptly return such hardware to Red Hat upon termination of this Agreement. If Customer subscribes to Satellite with an embedded database, then Customer is also subject to the terms set forth at

www.redhat.com/licenses/satellite_embedded.html.

2. Red Hat Network Provisioning. If Customer subscribes to RHN Provisioning and does not subscribe to Satellite, then the following provisions apply to that subscription. Customer agrees to comply with the quota limitations established by Red Hat from time to time. Customer warrants that the materials for which it uses the RHN Provisioning Service ("Materials") do not violate any applicable laws or infringe on the rights of any third party and Customer will indemnify Red Hat for any claims related to the Materials. Customer agrees to maintain a backup copy of all Materials. Red Hat will use commercially reasonable efforts to protect the confidentiality of the Materials while they are in Red Hat's possession.

3. Response Guidelines. A response to a request for Support Services shall consist of receipt of and acknowledgment by Red Hat of Customer's request for Support Services. Red Hat will use commercially reasonable efforts to provide a response within the response guideline period set forth in the table below during standard business hours and days as set forth in the table below, exclusive of Red Hat holidays. Customer acknowledges that a response may not include resolution for all requests for Support Services. Red Hat will use commercially reasonable efforts to provide answers and resolve Customer's requests for Support Services. However, Customer acknowledges and understands that no software is perfect or error free and that, despite Red Hat's commercially reasonable efforts, Red Hat may be unable to provide answers to or resolve some or all requests for Support Services. Red Hat makes no promises, guarantees, or assurances of any kind that it will be able to resolve all Customer Support Services requests.

4. SLA Tables:

4.1. Response Guidelines:

Subscription Type Response Guidelines

Basic Support Services

2 Business days by Web

Standard Support Services

4 Business Hours by telephone

2 Business Days by Web

Premium Support Services

1 hour by telephone

1 day by Web

Developer Support Services

1 Business Day by telephone or Web

4.2. Severity Level Definitions.:

Severity Level Definition

1   Catastrophic production problem which may severely impact the Customer's production systems, or in which Customer's production systems are down or not functioning; loss of production data and no procedural work around exists. Severity 1 problem also includes issues that result in an emergency condition that causes a serious security breach.

2   High-impact problem in which the Customer's operation is disrupted but there is capacity to remain productive and maintain necessary business-level operations. Severity 2 problem also applies for minor security breach situations.

3   Medium-to-low impact problem which involves partial non-critical functionality loss. One which impairs some operations but allows the Customer's system to continue to function. This may be a minor issue with limited loss or no loss of functionality or impact to the Customer's operation and issues in which there is an easy circumvention or avoidance by the end user. This includes documentation errors.

4   General usage questions, recommendations for future product enhancements or modifications and to calls that are passed to Red Hat for information purposes. There is no impact on the quality, performance or functionality of the product.

4.3. Standard Business Hours and Days:

GEOGRAPHY	STANDARD BUSINESS HOURS AND DAYS
North America, South America	9 a.m. To 9 p.m. EST Monday-Friday
Europe, Middle East, Africa	UK: 9 a.m. To 5 p.m. GMT Monday-Friday
	Other: 9 a.m. To 5 p.m. CET Monday-Friday

Japan	9 a.m. To 5 p.m. JST Monday-Friday
Pacific Rim Countries	9 a.m. To 5 p.m. local times Monday-Friday

4.4. Number of Contacts:

Number of Installed Servers	Number of Contacts
1 to 25	2
26 to 50	3
51 to 100	4
101 to 250	6
251 to 500	8
501 to 1000	12

5. Support Service Conditions.

5.1 Red Hat may, at its discretion, decline to provide Support Services for Software that has been modified or changed by Customer in any way, except as directed by Red Hat. Red Hat will provide Support Services for Supported Hardware and Platforms only. Red Hat will only provide Support Services for those Installed Systems for which Customer has subscribed under this Agreement.

5.2 Red Hat may, at its discretion, decline to provide Support Services for the packages included in the Software which are designated as "kernel-unsupported."

III. Learning Services Terms and Conditions

The following terms are applicable only to any Learning Services that Customer purchases:

A. Learning Services Definition:

The term "Learning Services" means Red Hat's training courses purchased under this Agreement which may include Red Hat's publicly available courses ("Open Enrollment Courses") or Red Hat's training units, which may be redeemed for Open Enrollment Courses ("TU's").

B. Learning Services Additional Terms and Conditions:

In addition to the General Terms and Conditions set forth in Section I hereof, the following terms apply to Learning Services:

1. Payment and Expense Reimbursement. The total fees must be paid prior to the delivery of Learning Services, notwithstanding any contrary term set forth in Schedule I.

2. Equipment and Facilities. For Open Enrollment Courses, Red Hat agrees to provide appropriate training facilities and hardware, and Customer will be liable for any loss or destruction of such equipment and hardware used in connection with the Learning Services. Learning Services, offerings, scheduling, capacity limitations, and availability are subject to change from time to time, without notice.

3. Customer Responsibilities. Customer is responsible for assessing the participants' suitability for the Learning Services and enrollment in the appropriate course(s). Customer is responsible for its participants' attendance at scheduled courses. Participants may be required to enter into individual training agreements that are applicable to the Learning Services. Except as otherwise specified in this Agreement, the Learning Services are provided subject to Red Hat's standard policies, terms and conditions as posted on redhat.com from time to time, and all such policies, terms and conditions are incorporated herein.

4. Rights to Training Materials. All training products, materials, methodologies, software, or processes provided in connection with the Learning Services and developed during the performance of the Learning Services (collectively, the "Training IP") are the sole property of Red Hat and are copyrighted by Red Hat unless otherwise indicated thereon. Training IP is provided solely for the use of the participants during the provision of the Learning Services and shall not be copied or transferred without the prior written consent of Red Hat. Training IP shall be deemed to be Red Hat's confidential and proprietary information.

5. Delivery Date and Cancellation. Customer agrees to take delivery of the Learning Services on the date(s) reserved. Any discount is contingent on delivery of the Learning Services on such date(s). If Customer cancels or reschedules with less than ten (10) business days notice there will be a charge or 25% of the undiscounted total fees plus any travel and other expenses incurred by Red Hat.

6. Training Units. TU's may be redeemed solely for training seats in standard, public, Open Enrollment Courses sponsored by Red Hat at a Red Hat training facility for a period of one (1) year from the effective date. TUs are non-refundable and may not be redeemed for cash or credit. Red Hat has sole discretion regarding where and when the TUs can be redeemed and they may not be redeemed or applied toward Red Hat eLearning or On-site Courses. TUs cannot be pro-rated or combined with any other discount, special offer or coupon.

7. Nonsolicitation. Customer agrees that during the term of this Agreement and for a period of one (1) year thereafter, Customer will not solicit or hire the instructor(s) that provide the Learning Services to Customer or induce such instructor(s) to reduce the number of hours he or she works for Red Hat regardless of whether such instructor is an employee or independent contractor of Red Hat.

Appendix 1

LICENSE AGREEMENT AND LIMITED PRODUCT WARRANTY RED HAT® ENTERPRISE LINUX® AND RED HAT® APPLICATIONS

This agreement governs the use of the Software and any updates to the Software, regardless of the delivery mechanism. The Software is a collective work under U.S. Copyright Law. Subject to the

following terms, Red Hat, Inc. ("Red Hat") grants to the user ("Customer") a license to this collective work pursuant to the GNU General Public License.

1. The Software. Red Hat Enterprise Linux and Red Hat Applications (the "Software") are either a modular operating system or application consisting of hundreds of software components. The end user license agreement for each component is located in the component's source code. With the exception of certain image files identified in Section 2 below, the license terms for the components permit Customer to copy, modify, and redistribute the component, in both source code and binary code forms. This agreement does not limit Customer's rights under, or grant Customer rights that supersede, the license terms of any particular component.

2. Intellectual Property Rights. The Software and each of its components, including the source code, documentation, appearance, structure and organization are owned by Red Hat and others and are protected under copyright and other laws. Title to the Software and any component, or to any copy, modification, or merged portion shall remain with the aforementioned, subject to the applicable license. The "Red Hat" trademark and the "Shadowman" logo are registered trademarks of Red Hat in the U.S. and other countries. This agreement does not permit Customer to distribute the Software using Red Hat's trademarks. Customer should read the information found at http://www.redhat.com/about/corporate/trademark/ before distributing a copy of the Software, regardless of whether it has been modified. If Customer makes a commercial redistribution of the Software, unless a separate agreement with Red Hat is executed or other permission granted, then Customer must modify any files identified as "REDHAT-LOGOS" and "anaconda-images" to remove all images containing the "Red Hat" trademark or the "Shadowman" logo. Merely deleting these files may corrupt the Software.

3. Limited Warranty. Except as specifically stated in this agreement or a license for a particular component, to the maximum extent permitted under applicable law, the Software and the components are provided and licensed "as is" without warranty of any kind, expressed or implied, including the implied warranties of merchantability, non-infringement or fitness for a particular purpose. Red Hat warrants that the media on which the Software is furnished will be free from defects in materials and manufacture under normal use for a period of 30 days from the date of delivery to Customer. Red Hat does not warrant that the functions contained in the Software will meet Customer's requirements or that the operation of the Software will be entirely error free or appear precisely as described in the accompanying documentation. This warranty extends only to the party that purchases the Software from Red Hat or a Red Hat authorized distributor.

4. Limitation of Remedies and Liability. To the maximum extent permitted by applicable law, the remedies described below are accepted by Customer as its only remedies. Red Hat's entire liability, and Customer's exclusive remedies, shall be: If the Software media is defective, Customer may return it within 30 days of delivery along with a copy of Customer's payment receipt and Red Hat, at its option, will replace it or refund the money paid by Customer for the Software. To the maximum extent permitted by applicable law, Red Hat or any Red Hat authorized dealer will not be liable to Customer for any incidental or consequential damages, including lost profits or lost savings arising out of the use or inability to use the Software, even if Red Hat or such dealer has been advised of the possibility of such damages. In no event shall Red Hat's liability under this agreement exceed the amount that Customer paid to Red Hat under this agreement during the twelve months preceding the action.

5. Export Control. As required by U.S. law, Customer represents and warrants that it: (a) understands that the Software is subject to export controls under the U.S. Commerce Department's Export Administration Regulations ("EAR"); (b) is not located in a prohibited destination country under the EAR or U.S. sanctions regulations (currently Cuba, Iran, Iraq, Libya, North Korea, Sudan and Syria); (c) will not export, re-export, or transfer the Software to any prohibited destination, entity, or individual without the necessary export license(s) or authorizations(s) from the U.S. Government; (d) will not use or transfer the Software for use in any sensitive nuclear, chemical or biological weapons, or missile technology end-uses unless authorized by the U.S. Government by regulation or specific license; (e) understands and agrees that if it is in the United States and exports or transfers the Software to eligible end users, it will, as required by EAR Section 740.17(e), submit semi-annual reports to the Commerce Department's Bureau of Industry & Security (BIS), which include the name and address (including country) of each transferee; and (f) understands that countries other than the United States may restrict the import, use, or export of encryption products and that it shall be solely responsible for compliance with any such import, use, or export restrictions.

6. Third Party Programs. Red Hat may distribute third party software programs with the Software that are not part of the Software. These third party programs are subject to their own license terms. The license terms either accompany the programs or can be viewed at http://www.redhat.com/licenses/. If Customer does not agree to abide by the applicable license terms for such programs, then Customer may not install them. If Customer wishes to install the programs on more than one system or transfer the programs to another party, then Customer must contact the licensor of the programs.

7. General. If any provision of this agreement is held to be unenforceable, that shall not affect the enforceability of the remaining provisions. This agreement shall be governed by the laws of the State of North Carolina and of the United States, without regard to any conflict of laws provisions, except that the United Nations Convention on the International Sale of Goods shall not apply.

Appendix 2

LICENSE AGREEMENT AND LIMITED PRODUCT WARRANTY RED HAT STRONGHOLD FOR RED HAT ENTERPRISE LINUX AND RED HAT STRONGHOLD FOR UNIX

This agreement governs the use of the Software and any updates to the Software, regardless of the delivery mechanism. The Software is a collective work under U.S. Copyright Law. Subject to the following terms, Red Hat, Inc. ("Red Hat") grants to the user ("Customer") a license to this collective work pursuant to the GNU General Public License.

1. The Software. Red Hat Stronghold for Red Hat Enterprise Linux and Red Hat Stronghold for Unix (the "Software") are secure web servers consisting of hundreds of software components. The end user license agreement for each component is located in the component's source code. Subject to Section 2 below, the license terms for the components permit Customer to copy, modify, and redistribute the component, in both source code and binary code forms. This agreement does not limit Customer's rights under, or grant Customer rights that supersede, the license terms of any particular component.

2. Intellectual Property Rights. The Software and each of its components, including the source code, documentation, appearance, structure and organization are owned by Red Hat and others and are protected under copyright and other laws. Title to the Software and any component, or to any copy, modification, or merged portion shall remain with the aforementioned, subject to the applicable license. The "Stronghold" and "Red Hat" trademarks and the "Shadowman" logo are registered trademarks of Red Hat in the U.S. and other countries. This agreement does not permit Customer to distribute the Software using Red Hat's trademarks. Customer should read the information found at http://www.redhat.com/about/corporate/trademark/ before distributing a copy of the Software, regardless of whether it has been modified.

3. Limited Warranty. Except as specifically stated in this agreement or a license for a particular component, to the maximum extent permitted under applicable law, the Software and the components are provided and licensed "as is" without warranty of any kind, expressed or implied, including the implied warranties of merchantability, non-infringement or fitness for a particular purpose. Red Hat warrants that the media on which the Software is furnished will be free from defects in materials and manufacture under normal use for a period of 30 days from the date of delivery to Customer. Red Hat does not warrant that the functions contained in the Software will meet Customer's requirements or that the operation of the Software will be entirely error free or appear precisely as described in the accompanying documentation. This warranty extends only to the party that purchases the Software from Red Hat or a Red Hat authorized distributor.

4. Limitation of Remedies and Liability. To the maximum extent permitted by applicable law, the remedies described below are accepted by Customer as its only remedies. Red Hat's entire liability, and Customer's exclusive remedies, shall be: If the Software media is defective, Customer may return it within 30 days of delivery along with a copy of Customer's payment receipt and Red Hat, at its option, will replace it or refund the money paid by Customer for the Software. To the maximum extent permitted by applicable law, Red Hat or any Red Hat authorized dealer will not be liable to Customer for any incidental or consequential damages, including lost profits or lost savings arising out of the use or inability to use the Software, even if Red Hat or such dealer has been advised of the possibility of such damages. In no event shall Red Hat's liability under this agreement exceed the amount that Customer paid to Red Hat under this agreement during the twelve months preceding the action.

5. Export Control. As required by U.S. law, Customer represents and warrants that it: (a) understands that the Software is subject to export controls under the U.S. Commerce Department's Export Administration Regulations ("EAR"); (b) is not located in a prohibited destination country under the EAR or U.S. sanctions regulations (currently Cuba, Iran, Iraq, Libya, North Korea, Sudan and Syria); (c) will not export, re-export, or transfer the Software to any prohibited destination, entity, or individual without the necessary export license(s) or authorizations(s) from the U.S. Government; (d) will not use or transfer the Software for use in any sensitive nuclear, chemical or biological weapons, or missile technology end-uses unless authorized by the U.S. Government by regulation or specific license; (e) understands and agrees that if it is in the United States and exports or transfers the Software to eligible end users, it will, as required by EAR Section 740.17(e), submit semi-annual reports to the Commerce Department's Bureau of Industry & Security (BIS), which include the name and address (including country) of each transferee; and (f) understands that countries other than the United States may restrict the import, use, or export of encryption products and that it shall be solely responsible for compliance with any such import, use, or export restrictions.

6. Third Party Programs. Red Hat may distribute third party software programs with the Software that are not part of the Software. These third party programs are subject to their own license terms. The license terms either accompany the programs or can be viewed at http://www.redhat.com/licenses/. If Customer does not agree to abide by the applicable license terms for such programs, then Customer may not install them. If Customer wishes to install the programs on more than one system or transfer the programs to another party, then Customer must contact the licensor of the programs.

7. General. If any provision of this agreement is held to be unenforceable, that shall not affect the enforceability of the remaining provisions. This agreement shall be governed by the laws of the State of North Carolina and of the United States, without regard to any conflict of laws provisions, except that the United Nations Convention on the International Sale of Goods shall not apply.

Copyright © 2003 Red Hat, Inc. All rights reserved. "Red Hat", "Stronghold" and the Red Hat "Shadowman" logo are registered trademarks of Red Hat, Inc. "Linux" is a registered trademark of Linus Torvalds. All other trademarks are the property of their respective owners

A.2 Novell Suse Enterprise Linux EULA

SUSE LINUX Enterprise Server (NSEL) 9

Novell Software License Agreement

PLEASE READ THIS AGREEMENT CAREFULLY. BY INSTALLING OR OTHERWISE USING THE SOFTWARE (INCLUDING ITS COMPONENTS), YOU AGREE TO THE TERMS OF THIS AGREEMENT. IF YOU DO NOT AGREE WITH THESE TERMS, DO NOT DOWNLOAD, INSTALL OR USE THE SOFTWAREAND, IF APPLICABLE, RETURN THE ENTIRE UNUSED PACKAGE TO THE RESELLER WITH YOUR RECEIPT FOR A REFUND. THE SOFTWARE MAY NOT BE SOLD, TRANSFERRED, OR FURTHERDISTRIBUTED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM NOVELL.

RIGHTS AND LICENSES

This Novell Software License Agreement ("Agreement") is a legal agreement between You (an entity or a person) and Novell, Inc. ("Novell") with respect to the software product identified in the title of this Agreement, media (if any) and accompanying documentation (collectively the "Software").

The Software is a collective work of Novell. You may make and use unlimited copies of the Software for Your distribution and use within Your Organization. The term "Organization" means a legal entity, excluding subsidiaries and affiliates with a separate existence for tax purposes or for legal personality purposes. An example of an Organization in the private sector would be a corporation, partnership, or trust, excluding any subsidiaries or affiliates of the organization with a separate tax identification number or company registration number. In the

public sector, an example of Organization would be a specific goverment body or local goverment authority.

The Software is a modular operating system. Most of the components are open source packages, developed independently, and accompanied by separate license terms. Your license rights with respect to individual components accompanied by separate license terms are defined by those terms; nothing in this Agreement shall restrict, limit, or otherwise affect any rights or obligations You may have, or conditions to which You may be subject, under such license terms.

While the license terms for a component may authorize You to distribute the component, You may not use any Novell marks (e.g., SUSE and SUSE LINUX) in distributing the component, whether or not the component contains Novell marks.

OTHER LICENSE TERMS AND RESTRICTIONS

The Software is protected by the copyright laws and treaties of the United States ("U.S.") and other countries and is subject to the terms of this Agreement. The Software is licensed to You, not sold.

The Software may be bundled with other software programs ("Bundled Programs"). Your license rights with respect to Bundled Programs accompanied by separate license terms are defined by those terms; nothing in this Agreement shall restrict, limit, or otherwise affect any rights or obligations You may have, or conditions to which You may be subject, under such license terms.

Novell reserves all rights not expressly granted to You. You may not: (1) reverse engineer, decompile, or disassemble the Software except and only to the extent it is expressly permitted by applicable law or the license terms accompanying a component of the Software; or (2) transfer the Software or Your license rights under this Agreement, in whole or in part.

MAINTENANCE AND SUPPORT

Your rights with respect to updates, patches, or other materials received under a subscription to a Novell maintenance program for the Software are defined by the relevant maintenance program terms. Novell has no obligation under this Agreement to provide maintenance or support for the Software. Depending on how You acquired the Software, You may have also acquired a maintenance subscription for the Software. For more information on Novell's current maintenance and support offerings, see http://support.novell.com.

OWNERSHIP RIGHTS

No title to or ownership of the Software is transferred to You. Novell and/or its licensors owns and retains all title and ownership of all intellectual property rights in the Software, including any adaptations or copies. You acquire only a license to use the Software.

LIMITED WARRANTY

For ninety (90) days from Your date of purchase, Novell warrants that (1) any media on which the Software is delivered is free from physical defects; and (2) the Software will substantially

conform to the documentation accompanying the Software. If the defective items are returned to Novell or if You report the nonconformity to Novell within ninety (90) days from the date of purchase, Novell will at its sole discretion either resolve the nonconformity or refund the license fees You paid for the Software. Any misuse or unauthorized modification of the Software voids this warranty. THE FOREGOING WARRANTY IS YOUR SOLE AND EXCLUSIVE REMEDY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. (The foregoing warranty does not apply to Software provided free of charge. SUCH SOFTWARE IS PROVIDED "AS IS" WITHOUT ANY WARRANTIES OF ANY KIND.)

THE SOFTWARE IS NOT DESIGNED, MANUFACTURED OR INTENDED FOR USE OR DISTRIBUTION WITH ON-LINE CONTROL EQUIPMENT IN HAZARDOUS ENVIRONMENTS REQUIRING FAIL-SAFE PERFORMANCE, SUCH AS IN THE OPERATION OF NUCLEAR FACILITIES, AIRCRAFT NAVIGATION, COMMUNICATION, OR CONTROL SYSTEMS, DIRECT LIFE SUPPORT MACHINES, WEAPONS SYSTEMS, OR OTHER USES IN WHICH FAILURE OF THE SOFTWARE COULD LEAD DIRECTLY TO DEATH, PERSONAL INJURY, OR SEVERE PHYSICAL OR ENVIRONMENTAL DAMAGE.

THE SOFTWARE IS ONLY COMPATIBLE WITH CERTAIN COMPUTERS AND OPERATING SYSTEMS. THE SOFTWARE IS NOT WARRANTED FOR NON-COMPATIBLE SYSTEMS. Call Novell or Your dealer for information about compatibility.

Non-Novell Products. The Software may include or be bundled with hardware or other software programs licensed or sold by a licensor other than Novell. NOVELL DOES NOT WARRANT NON-NOVELL PRODUCTS. ANY SUCH PRODUCTS ARE PROVIDED ON AN "AS IS" BASIS. ANY WARRANTY SERVICE FOR NON-NOVELL PRODUCTS IS PROVIDED BY THE PRODUCT LICENSOR IN ACCORDANCE WITH THE APPLICABLE LICENSOR WARRANTY.

EXCEPT AS OTHERWISE RESTRICTED BY LAW, NOVELL DISCLAIMS AND EXCLUDES ANY AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTIES OF MERCHANTABILITY, TITLE, NONINFRINGEMENT, OR FITNESS FOR A PARTICULAR PURPOSE. NOVELL MAKES NO WARRANTY, REPRESENTATION OR PROMISE NOT EXPRESSLY SET FORTH IN THIS LIMITED WARRANTY. NOVELL DOES NOT WARRANT THAT THE SOFTWARE WILL SATISFY YOUR REQUIREMENTS OR THAT THE OPERATION OF THE SOFTWARE WILL BE UNINTERRUPTED. Some jurisdictions do not allow certain disclaimers and limitations of warranties, so portions of the above limitations may not apply to You. This limited warranty gives You specific rights and You may also have other rights which vary from state to state.

LIMITATION OF LIABILITY

(a) Consequential Losses. NEITHER NOVELL NOR ANY OF ITS LICENSORS, SUBSIDIARIES, OR EMPLOYEES WILL IN ANY CASE BE LIABLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL, INDIRECT, TORT, ECONOMIC OR PUNITIVE DAMAGES ARISING OUT OF THE USE OF OR INABILITY TO USE THE SOFTWARE, INCLUDING WITHOUT LIMITATION LOSS OF PROFITS, BUSINESS OR DATA, EVEN IF ADVISED OF THE POSSIBILITY OF THOSE DAMAGES.

(b) Direct Damages. IN NO EVENT WILL NOVELL'S AGGREGATE LIABILITY FOR DIRECT DAMAGES TO PROPERTY OR PERSON (WHETHER IN ONE INSTANCE OR A SERIES OF INSTANCES) EXCEED 1.25 TIMES THE AMOUNT PAID BY YOU FOR THE SOFTWARE OUT OF WHICH SUCH CLAIM AROSE [OR $50 (U.S.) IF YOU RECEIVED THE SOFTWARE FREE OF CHARGE]. The above exclusions and limitations will not apply to claims relating to death or personal injury. In those jurisdictions that do not allow the exclusion or limitation of damages, Novell's liability shall be limited or excluded to the maximum extent allowed within those jurisdictions.

GENERAL TERMS

Term. This Agreement becomes effective on the date You legally acquire the Software and will automatically terminate if You breach any of its terms. Upon termination of this Agreement, You must destroy the original and all copies of the Software or return them to Novell and delete the Software from Your systems.

Benchmark Testing. This benchmark testing restriction applies to You if You are a software vendor or if You are performing testing on the Software at the direction of or on behalf of a software vendor. You may not, without Novell's prior written consent not to be unreasonably withheld, publish or disclose to any third party the results of any benchmark test of the Software. If You are a vendor of products that are functionally similar to or compete with the Software ("Similar Products"), or are acting on behalf of such a vendor, and You publish or disclose benchmark information on the Software in violation of this restriction, then notwithstanding anything to the contrary in the Similar Product's end user license agreement, and in addition to any other remedies Novell may have, Novell shall have the right to perform benchmark testing on Similar Products and to disclose and publish that benchmark information and You hereby represent that You have authority to grant such right to Novell.

Transfer. This Agreement may not be transferred or assigned without the prior written approval of Novell.

Law and Jurisdiction. This Agreement is governed by the laws of the State of Utah, U.S. Any action at law relating to this Agreement may only be brought before the courts of competent jurisdiction of the State of Utah. If, however, Your country of principal residence is a member state of the European Union or the European Free Trade Association, this Agreement is governed by the laws of that country, and any action at law may only be brought before a court of competent jurisdiction of that country.

Entire Agreement. This Agreement and the Upgrade/Additive Agreement (if applicable) sets forth the entire understanding and agreement between You and Novell and may be amended only in a writing signed by both parties. NO LICENSOR, DISTRIBUTOR, DEALER, RETAILER, RESELLER, SALES PERSON, OR EMPLOYEE IS AUTHORIZED TO MODIFY THIS AGREEMENT OR TO MAKE ANY REPRESENTATION OR PROMISE THAT IS DIFFERENT FROM, OR IN ADDITION TO, THE TERMS OF THIS AGREEMENT.

Waiver. No waiver of any right under this Agreement will be effective unless in writing, signed by a duly authorized representative of the party to be bound. No waiver of any past or present

right arising from any breach or failure to perform will be deemed to be a waiver of any future right arising under this Agreement.

Severability. If any provision in this Agreement is invalid or unenforceable, that provision will be construed, limited, modified or, if necessary, severed, to the extent necessary, to eliminate its invalidity or unenforceability, and the other provisions of this Agreement will remain unaffected.

Export Compliance. Any person or entity exporting or re-exporting Novell products directly or indirectly and via any means, including electronic transfer, is wholly responsible for doing so in accordance with the U.S. Export Administration Regulations and the laws of host countries. Novell assumes no responsibility or liability for your failure to obtain any necessary export approvals. Approvals are dependent upon an item's technical characteristics, the destination, end-use and end-user, as well as other activities of the end user. Specifically, no Novell product may be exported to embargoed or otherwise restricted countries or end users. Please consult the Bureau of Industry and Security web page and other sources before exporting Novell products from the U.S. and familiarize yourself with the laws of destination countries before reexporting Novell products. This provision shall survive the expiration or earlier termination of this Agreement. Please refer to the export matrix for Novell products for more information on exporting Novell Software. You can download a copy from http://www.novell.com/info/exports/ or obtain a copy from your local Novell office.

U.S. Government Restricted Rights. Use, duplication, or disclosure by the U.S. Government is subject to the restrictions in FAR 52.227-14 (June 1987) Alternate III (June 1987), FAR 52.227-19 (June 1987), or DFARS 252.227-7013 (b)(3) (Nov 1995), or applicable successor clauses. Contractor/ Manufacturer is Novell, Inc., 1800 South Novell Place, Provo, Utah 84606.

Other. The application of the United Nations Convention of Contracts for the International Sale of Goods is expressly excluded.

©1993, 2000-2004 Novell, Inc. All Rights Reserved.

Novell is a registered trademark, and SUSE LINUX is registered trademark, and the SUSE logo is a trademark, of SUSE LINUX AG, a Novell company, in the United States and other countries. Linux is a registered trademark of Linus Torvalds.

06/22/04

A.3   GNU GPL

GNU GENERAL PUBLIC LICENSE

Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.

51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated

into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

one line to give the program's name and an idea of what it does.

Copyright (C) yyyy name of author

This program is free software; you can redistribute it and/or

modify it under the terms of the GNU General Public License

as published by the Free Software Foundation; either version 2

of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful,

but WITHOUT ANY WARRANTY; without even the implied warranty of

MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the

GNU General Public License for more details.

You should have received a copy of the GNU General Public License

along with this program; if not, write to the Free Software

Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author

Gnomovision comes with ABSOLUTELY NO WARRANTY; for details

type `show w'. This is free software, and you are welcome

to redistribute it under certain conditions; type `show c'

for details.

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than `show w' and `show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright

interest in the program `Gnomovision'

(which makes passes at compilers) written

by James Hacker.

signature of Ty Coon, 1 April 1989

Ty Coon, President of Vice

This General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this is what you want to do, use the GNU Lesser General Public License instead of this License.

List of symbols/abbreviations/acronyms/initialisms

BSD	Berkeley System Distribution
C2	Command & Control
Caveat Emptor	A Latin term meaning "let the buyer beware"
DMSS	Directorate of Maritime Ship Support
DND	Department of National Defence
DOJ	Department of Justice
DRDC	Defence Research Development Canada
EULA	End User License Agreement
FSF	Free Software Foundation
GNU	GNU Not UNIX
GoC	Government of Canada
GPL	GNU Public License
HMCCS	Halifax Modernization Command Control System
IP	Intellectual Property
NSEL	Novell Suse Enterprise Linux
R&D	Research & Development
RHEL	Red Hat Enterprise Linux
RHN	Red Hat Network

Glossary

EULA (End User License Agreement)

A EULA is a type of software license. EULA's or software licenses are detailed and often painstakingly lay out the rules that both parties (the licensor and licensee) must abide by. More specifically, it sets the parameters and permissions allotted to the end user with respect to the software. EULA's/software licenses tend to be very restrictive on end users and often attempt to force a pseudo-legally binding agreement on the end user/organization.

FSF (Free Software Foundation)

The FSF is a not for profit organization founded by Richard Stallman of MIT that promotes free software. The FSF considers software "free" in the sense that the end user is free to have access to the source code and modify as necessary. The FSF is the maintainer of the GNU software movement and is the author of the GNU GPL license.

GPL (GNU Public License)

The GPL is a public license that was created by the FSF (Free Software Foundation). This license provides the end-user with the right to freedom in choice and diversity of software. Furthermore, this freedom is provided by having access to the software's source code. GPL-licensed software does not have to be free however, and developers can charge end-users for it. Those that develop with GPL-licensed software are, by the terms of the agreement, required to distribute any changes to the original source code and publish it using the GPL license.

License

See EULA.

Linux

Linux is a free and open source software operating system based on UNIX. It was originally conceived and developed (the kernel) by Linus Torvalds, who holds and maintains the copyright to Linux. With the assistance of thousands of developers around the world, it has turned into a robust, stable, and secure operating system, not unlike its other UNIX-based counterparts. Other than the kernel, it is mainly composed of developer-contributed software, much from the FSF (Free Software Foundation).

UNIX

A multi-user, multi-tasking, multi-threaded operating system based on a kernel that provides a consistent interface to the user for both interactive and background job processing. UNIX is multi-platform and hardware independent, and supports advanced API's. It is generally considered by the computing industry as the hallmark of scalable, robust, secure, and reliable computing. It was originally developed at AT&T Labs by Dennis Ritchie and Ken Thompson.

This page intentionally left blank.

Distribution list

Document No.: DRDC Valcartier TN 2006-573

LIST PART 1: Internal Distribution by Centre:

- 3   Document Library
- 1   Richard Carbone (author)
- 1   François Lemieux
- 1   Robert Charpentier
- 1   Michel Lizotte
- 1   Guy Turcotte
- 1   Yves van Chestein

- 9   TOTAL LIST PART 1

LIST PART 2: External Distribution by DRDKIM

DRDC Corporate HQ

- 1   Klaus Kollenberg
- 1   Donna Wood
- 1   Directorate R & D – Knowledge and Information Management (PDF)

NDHQ (101 Colonel By, Ottawa, K1A 0K2)

- 1   Directorate of Maritime Support Systems
  Attn: Mr Norbert Haché
- 1   Directorate Information Management Strategic Planning 3
  Attn: Maj J.Perry Mellway
- 1   Directorate Information Management Strategic Planning 2-2
  Attn: Maj P.C. Kvas
- 1   Directorate of Aerospace Engineering Support 5
  Attn: Sylvain Fleurant
- 1   Directorate Information Management Requirements 4-6
  Attn: Mark Daniels
- 1   Directorate Distributed Computing Engineering and Integration 3-5
  Attn: Capt Karine Pellerin
- 1   Directorate Information Management Security 2-3-2-2
  Attn: Paul Lamoureux

- 10   TOTAL LIST PART 2

19   TOTAL COPIES REQUIRED

This page intentionally left blank.

DOCUMENT CONTROL DATA

(Security classification of title, body of abstract and indexing annotation must be entered when the overall document is classified)

1. ORIGINATOR (The name and address of the organization preparing the document. Organizations for whom the document was prepared, e.g. Centre sponsoring a contractor's report, or tasking agency, are entered in section 8.) DRDC Valcartier	2. SECURITY CLASSIFICATION (Overall security classification of the document including special warning terms if applicable.) Unclassified

3. TITLE (The complete document title as indicated on the title page. Its classification should be indicated by the appropriate abbreviation (S, C, R or U) in parentheses after the title.)

(U) Enterprise Linux licenses: A comparison of licenses between Red Hat and Suse Enterprise Linux

4. AUTHORS (last name, followed by initials – ranks, titles, etc. not to be used)

Carbone, R.

5. DATE OF PUBLICATION (Month and year of publication of document.) October 2006	6a. NO. OF PAGES (Total containing information, including Annexes, Appendices, etc.) 39	6b. NO. OF REFS (Total cited in document.) 9

7. DESCRIPTIVE NOTES (The category of the document, e.g. technical report, technical note or memorandum. If appropriate, enter the type of report, e.g. interim, progress, summary, annual or final. Give the inclusive dates when a specific reporting period is covered.)

Technical Note

8. SPONSORING ACTIVITY (The name of the department project office or laboratory sponsoring the research and development – include address.)

DMSS HMCCS

9a. PROJECT OR GRANT NO. (If appropriate, the applicable research and development project or grant number under which the document was written. Please specify whether project or grant.) 1430JT 15AV34	9b. CONTRACT NO. (If appropriate, the applicable number under which the document was written.)
10a. ORIGINATOR'S DOCUMENT NUMBER (The official document number by which the document is identified by the originating activity. This number must be unique to this document.) DRDC Valcartier TN 2006-573	10b. OTHER DOCUMENT NO(s). (Any other numbers which may be assigned this document either by the originator or by the sponsor.)

11. DOCUMENT AVAILABILITY (Any limitations on further dissemination of the document, other than those imposed by security classification.)

(X) Unlimited distribution
(   ) Defence departments and defence contractors; further distribution only as approved
(   ) Defence departments and Canadian defence contractors; further distribution only as approved
(   ) Government departments and agencies; further distribution only as approved
(   ) Defence departments; further distribution only as approved
(   ) Other (please specify):

12. DOCUMENT ANNOUNCEMENT (Any limitation to the bibliographic announcement of this document. This will normally correspond to the Document Availability (11). However, where further distribution (beyond the audience specified in (11) is possible, a wider announcement audience may be selected.))

13. ABSTRACT (A brief and factual summary of the document. It may also appear elsewhere in the body of the document itself. It is highly desirable that the abstract of classified documents be unclassified. Each paragraph of the abstract shall begin with an indication of the security classification of the information in the paragraph (unless the document itself is unclassified) represented as (S), (C), (R), or (U). It is not necessary to include

here abstracts in both official languages unless the text is bilingual.)

The Canadian Navy's Directorate of Maritime Ship Support in Summer 2005 asked DRDC Valcartier to look at various support options if Linux were to be implemented as the Navy's new Halifax-class frigate C2 operating system [1]. This task was undertaken by senior defence scientist Mr. Robert Charpentier and his team. In Autumn 2005, the Navy requested that Mr. Charpentier and his team also briefly explore the license differences between two very popular Linux operating systems: Red Hat Enterprise Linux and Novell Suse Enterprise Linux. The goal was to have a simple, easy to understand and non-legal interpretation of the two licenses and conclude what, if any, particular impact either license could have over the possible implementation of Linux.

.

14. KEYWORDS, DESCRIPTORS or IDENTIFIERS (Technically meaningful terms or short phrases that characterize a document and could be helpful in cataloguing the document. They should be selected so that no security classification is required. Identifiers, such as equipment model designation, trade name, military project code name, geographic location may also be included. If possible keywords should be selected from a published thesaurus, e.g. Thesaurus of Engineering and Scientific Terms (TEST) and that thesaurus identified. If it is not possible to select indexing terms which are Unclassified, the classification of each should be indicated as with the title.)

Linux, enterprise Linux, Red Hat, Novell, Suse, license, license agreement, EULA, end user license agreement, open source, RHEL, NSEL, right to use

Defence R&D Canada

Canada's Leader in Defence
and National Security
Science and Technology

R & D pour la défense Canada

Chef de file au Canada en matière
de science et de technologie pour
la défense et la sécurité nationale

DEFENCE **R&D** DÉFENSE

WWW.drdc-rddc.gc.ca