



# Novell YES Certified System Test Kit Policies

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## Table of Contents

Hardware Component Exchange Guide.....	3
3C Policy for Novell YES CERTIFICATIONS.....	6
3C Policy Introduction:.....	6
3C Policy Details:.....	7
I. GENERAL RULES.....	7
II. EXCHANGING CERTIFIED COMPONENTS:.....	7
III. EXCHANGING COMPONENTS THAT ARE NOT CERTIFIABLE:.....	7
IV. OTHER CHANGES THAT CAN BE MADE.....	8
Procedure for requesting a 3C bulletin:.....	8
3C FAQ:.....	9
System re-certification requirements with New Support Packs.....	11
When is system re-certification required? .....	11
Linux System Test Requirements.....	12
Reduced Testing Policies.....	13
SLES to SLED Certification Policy.....	14
Bulletin Release.....	15
Products.txt.....	17
OES Equivalent Operating Systems.....	18
NetWare Driver Testing Policies.....	19
LAN and HBA Embedded Chipset Testing.....	19
Integrated Device Controllers.....	19
Submission File Security.....	20
Remote KVM and/or Remote Management Products.....	21
NATC Cluster Testing.....	22
Novell Cluster Services Bulletins.....	23
Third-party File Submission Process for Novell Products and Support Packs.....	24

# Hardware Component Exchange Guide

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Low level components are an integral part of any system and/or motherboard. These components include BIOS, CPUs, memory, adapters, etc. When a component is changed in a system configuration, the resulting configuration may still be YES CERTIFIED based on the criteria listed below and the issuance of a new bulletin. For some changes, recertification is required. In cases where no additional testing is required for a changed configuration, a new bulletin will be issued reflecting the change.

The following table defines configurations, which, while different from the exact configuration indicated on the bulletin are certified or will require recertification. This information applies to YES CERTIFIED with either NetWare or SUSE LINUX.

Component	Change	Required Action	Eligible for reduced YES CERTIFIED Testing
Mainboard	Version and revision	Recertify	No
	Bus Structure	Recertify	No
	Major BIOS / Firmware Changes	Recertify	No
	Minor BIOS / Firmware Changes	Recertify	Yes
	BIOS / Firmware String changes (OEM System)	*Certified	N/A
System Management Hardware	Presence (e.g., on add-on cards)	Recertify	No
	Firmware	Recertify	No
CPU	Speed Increase	*Certified	N/A
	Speed Decrease	*Certified	N/A
	Family / Model	Recertify	Yes
	Change the number of CPUs (original and new number of CPUs must be more than one)	*Certified	N/A
	Change the number of cores (original and new number of cores must be more than one)	*Certified	N/A
	One CPU to multiple CPUs or multiple CPUs to one CPU	Recertify	Yes
	One core to multiple cores or multiple cores to one core	Recertify	Yes

Component	Change	Required Action	Eligible for reduced YES CERTIFIED Testing
Memory OES NetWare	Any change between 512MB and 4GB	*Certified	N/A
	Any change crossing 4GB boundary	Recertify	Yes
Memory OES Linux/SLE 10 (i386)	Any change between 512MB and 4GB	*Certified	N/A
	Any change crossing 4GB boundary	Recertify	Yes
	Any change between 4GB and 16GB	*Certified	N/A
	Any change crossing 16GB boundary	Recertify	No
	Any change between 16GB and 48GB	Recertify	No
Memory SLE 11 (i386)	Any change between 512MB and 16GB	*Certified	N/A
	Any change crossing 16GB boundary	Recertify	No
	Any change between 16GB and 48GB	Recertify	No
Memory OES Linux/SLE 10/11 (x86_64)	Any change between 512MB and 512GB	*Certified	N/A
	Any change crossing above 512GB boundary	Recertify	No
	Any increase between 512GB and 64TB	Recertify	No
	Any decrease from highest tested configuration	*Certified	N/A
Memory Other Architecture	Contact Novell		
Network Card	Certified Adapter / Driver	*Certified	N/A
	Not Certified Adapter / Driver	Recertify	Yes
	Increase number of NICs	Recertify	Yes
	Decrease number of NICs	*Certified	N/A
	Speed Increase (Adapter/Driver remain same)	Recertify	Yes
	Speed Decrease (Adapter/Driver remain same)	*Certified	N/A
Storage	Adapter / Driver	*Certified	N/A
	Not certified Adapter / Driver	Recertify	Yes
	Increase the number of HBAs	Recertify	Yes
	Decrease the number of HBAs	*Certified	N/A
	Interface type Recertify Yes	Recertify	Yes
	Firmware Recertify Yes	Recertify	Yes
HD Drives	RAID Level / Manufacturer / Model	*Certified	N/A
	Number (if RAID Controller present or no RAID)	*Certified	N/A

Component	Change	Required Action	Eligible for reduced YES CERTIFIED Testing
	Interface Type	Recertify	Yes
Floppy Drive	Presence or Type	*Certified	N/A
CD (-RW) / DVD Drive	Presence or Type	*Certified	N/A
Tape Drive	Presence or Type	*Certified	N/A
Video Card	Qty. - exact same Adapter and exact same Driver	*Certified	N/A
	Qty. - Adapter and Driver changed	Recertify	Yes
	Bus Type	Recertify	Yes
	Memory	*Certified	N/A
	Manufacturer or Model using same exact Driver	*Certified	N/A
	Manufacturer/Model and Driver changed (non embedded)	Recertify	Yes
	If Embedded video adapter changes	Recertify	No
Chassis	Type (e.g. Tower, Rack Mount vs other)	*Certified	N/A

**Component:** The components of a system that when changed may require recertification.

**Change:** This column indicates what part in a system is being changed from the original Yes Certification bulletin tested configuration.

**Required Action:** This column indicates what action is required to attain YES CERTIFIED status.

**Eligible for Reduced YES CERTIFIED Testing:** Whether a change is covered by a reduced test.

**Recertify:** Indicates certification tests need to be successfully completed again due to the configuration change.

**\*Certified:** The new system configuration created by the change is still certified but a new bulletin must be issued that reflects the change.

# 3C Policy for Novell YES CERTIFICATIONS

Last Modified May 22, 2007

## 3C Policy Introduction:

The Novell YES CERTIFIED mark is widely respected in the industry and represents compatibility of Novell's products with third party products. A comprehensive list of products with the YES CERTIFIED mark is of great value for Novell, our partners, our customers, and our end users. The objective of 3C is to increase the quantity of YES CERTIFIED products while maintaining the quality of the mark.

3C is a program whereby additional systems may become YES CERTIFIED with no additional testing. This process is carefully managed by this policy, which dictates the rules for creating additional YES CERTIFIED products according to the 3C policy.

The 3C name is helpful in explaining the 3C program. The term '3C' was derived from the statement 'Certified plus Certified equals Certified'. Being interpreted the statement breaks down as follows:

The first 'certified' refers to a computer system that has successfully passed certification testing on a particular Novell OS kernel using the appropriate system certification test suite.

The second 'certified' refers to a device driver and associated component LAN or storage hardware that has been successfully tested and certified on the exact Novell OS kernel using the appropriate component certification test suite. Component hardware certification tests are available for LAN and storage components.

The third 'certified' equates to the combining of a previously certified system stated above with previously certified component driver(s) and component hardware stated above and results in a new '3C' certified system. The 'new' 3C system certification requires Novell approval.

A useful analogy is that of a computer store with certified systems on one shelf and a host of certified component hardware on another shelf. Every individual item on both shelves have been certified using either the system certification test kit or the component certification kits. One simply needs to match the desired system from the system shelf with components from the component shelf to create the desired unique system.

Another feature of 3C is the ability to create new YES CERTIFIED bulletins using components that don't have a component certification program. These components include CPUs, hard disk drives, CD-ROMs, DVD-ROMs, audio adapters, and video adapters. As is the case with all YES certifications, Novell approval for these new 3C bulletins is required.

Finally, 3C can also be used to create new YES CERTIFIED bulletins for changes in the product name, the company name (for OEMed systems), or the product description.

## **3C Policy Details:**

### **I. GENERAL RULES**

1. No new items may be added to the list of "Operating Systems" and "Other Products" on a 3C child bulletin that was not listed on the parent bulletin.
2. In order for any system to be certified, it must be supported by the vendor who distributes it.
3. Hardware components may be removed from the configuration. For example, if the parent bulletin included three LAN adapters, a child bulletin can be created which only includes two of the three adapters.
4. If a component is exchanged, it must be a one for one exchange of a like component. For example, if a host bus adapter is removed from the Tested Configuration section of a parent bulletin, another comparable host bus adapter must take its place on the child bulletin. Replacement adapters must have the same type of interface (e.g. exchange an IDE HBA for an IDE HBA, exchange a SCSI HBA for a SCSI HBA, exchange a RAID HBA for a RAID HBA, exchange a SATA HBA for a SATA HBA, exchange a gigabit NIC for a gigabit NIC, etc.). Note that the bus interface of removed and replaced adapters does not need to be the same.

### **II. EXCHANGING CERTIFIED COMPONENTS:**

To obtain a new bulletin once a system has been certified with a specified operating system, kernel, service pack, and architecture, a LAN or storage component in the system may be exchanged for another certified component under the following conditions:

1. No additional certifiable components may be introduced into the configuration on the bulletin. For example, if a certified configuration exists with only one host bus adapter, you may not simply add another host bus adapter to the configuration. Instead, you must remove the original host bus adapter and replace it with a new host bus adapter.
2. Exchanged components must be certified with the same operating system, service pack, kernel, and architecture as the original hardware.
3. If the adapter/driver pair that you wish to exchange into a new bulletin does not have a YES CERTIFIED bulletin, the appropriate component test kit may be used to test the adapter/driver. For the LAN test tools see [http://developer.novell.com/wiki/index.php/LAN\\_Test\\_Tools](http://developer.novell.com/wiki/index.php/LAN_Test_Tools). For the storage test tools see [http://developer.novell.com/wiki/index.php/Storage\\_Test\\_Tools](http://developer.novell.com/wiki/index.php/Storage_Test_Tools).

### **III. EXCHANGING COMPONENTS THAT ARE NOT CERTIFIABLE:**

To obtain a new bulletin once a system has been certified with a specific operating system, service pack, and architecture, the following non-certifiable components in the system may be exchanged:

1. CPU, as long as the exchanged CPU is in the same family and has the same number of cores as the original CPU in the parent bulletin.

2. Any number of CPUs more than one (that the system supports) may be listed, if the configuration of the parent bulletin has more than one CPU.
3. Hard disk drive.
4. CD-ROM / DVD-ROM.
5. Changing the amount of physical RAM memory in a system as long as the change does not cross above or below the 4GB boundary (for i386 or x86-64 architectures).  
Changing the amount of physical RAM memory in a system (for ia64/IPF architectures).
6. Audio adapter
7. Video adapter

#### **IV. OTHER CHANGES THAT CAN BE MADE**

To obtain a new bulletin once a system has been certified with a specific operating system, service pack, and architecture, the following bulletin fields may also be changed, either with or without other hardware configuration changes:

1. Company name, if a system is being OEM'ed. Note that the original equipment manufacturer must initiate the 3C process in NBS rather than the company that is reselling the OEM'ed system.
2. Product name. Note that this does not indicate a hardware configuration change, but rather a renaming of the system.
3. Product description.

Note that if other changes are made to a system configuration beyond what is specified in the 3C Policy Details above, then a 3C bulletin cannot be done. In order for the system to be YES CERTIFIED the system will need to be certification tested. In many cases a reduced test suite may be used rather than the full test suite. See the "Component Exchange Guide" for details.

#### **Procedure for requesting a 3C bulletin:**

Once the policy conditions have been met, the Novell partner that originally certified the system may open a new bulletin submission in the NBS database.

1. Go to <http://developer.novell.com/nbswebapp/yesCert.jsp> and click on "Create 3C Bulletin."
2. Enter the bulletin number of the parent bulletin. Note that only originally tested bulletins may be used as parents for 3C child bulletins. You may not create a 3C bulletin that is a "child of a child."
3. Enter the changes that are requested for the child bulletin, and click submit.

4. Novell will review the 3C bulletin submission. If all requirements have been met, Novell will place the submission in the NBS Final Customer Review state, from which the partner or Novell may issue the bulletin. If the requirements have not been met, Novell may reject the bulletin request. If issues are not resolved in a timely manner, the submission will be deleted from the database.

### **3C FAQ:**

*What is the advantage of 3C to Novell's partners?*

Additional supported system configurations can receive YES CERTIFIED bulletins with less effort.

*What is the advantage of 3C to Novell's customers and end users?*

An increased availability of compatible products that are YES CERTIFIED for customers and end users.

*As it relates to 3C, what are parent and child bulletins?*

A parent bulletin is a bulletin for which full certification testing was completed. A child bulletin is a bulletin that is created from making changes to a parent bulletin as allowed by the 3C policy.

*Does a bulletin created through the 3C process look any different than any other bulletin?*

The only difference is that on a child bulletin created through the 3C process the parent bulletin number is listed.

*Does the LAN and/or storage component and driver in the parent system need to be certified before a child bulletin can be created?*

No. Only the LAN and storage components and drivers that are added to the child need to be certified. The original system certification does not require certified LAN and storage components and drivers because they are tested in the original system certification. However it is important (and therefore required) that these newly added components be tested and certified to ensure compatibility.

*Can a child bulletin be created using a LAN or storage component and driver that were certified with a different OS than the parent?*

No.

*Can a child bulletin be created using a LAN or storage component and driver that were certified with a different version of the OS than the parent?*

No.

*Can a child bulletin be created using a LAN or storage component and driver that were certified with a different support pack of an OS than the parent?*

No.

*Can a child bulletin be created using a LAN or storage component and driver that were certified with a different kernel architecture than the parent?*

No.

*Can a child bulletin be created using a LAN or storage component and driver that were certified with a different kernel version than the parent?*

No.

*What if a kernel update or security update is needed in a particular certification?*

The certification can be done with a kernel or security update applied, but a configuration note will be required on the bulletin to state this. Note that the resulting parent certification could only be used in a 3C child bulletin with a component/driver certification that was tested on this exact updated kernel.

# System re-certification requirements with New Support Packs

## *When is system re-certification required?*

We require re-certification with a new support pack in order to receive a bulletin. We issue a bulletin for the support pack that has been tested. When a new support pack is released we allow Yes Certification testing on the previous support pack for 6 months from the release date of the new support pack. This 6 month period is valid as long as Novell continues to have a 6 month support period for the previous support pack.

## **FAQ:**

*Can reduced testing be used for re-certifying a system on a new support pack.*

No. We require full Yes Certification testing for re-certification of a system on a new support pack.

# Linux System Test Requirements

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The following tests are required to run for the complete 12 hr Overnight Stress test during the Linux Server and Workstation projects. These tests must be run at the same time, run to completion and receive passing testing results. If any of the following tests fail during the overnight stress test time period, then all tests must be run again to receive a Novell YES certification. The following Test are : Memory Test, Hard Drive Tests, USB Tests, NIC and Router Tests.

The following tests may be run by themselves if they fail during the overnight stress test. The following test are Floppy and CD / DVD tests.

# Reduced Testing Policies

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Using the Reduced Test projects has the following requirements:

The reduced test projects apply where the configurations have changed. See the Section, “Hardware Component Exchange Guide” for a complete list of components that when changed are eligible for reduced testing.

To qualify for reduced testing, first successfully complete a full system test project on the most capable model in the range of systems at the time of testing.

## **Changing the CPU speeds:**

CPU speed changes within the same family are eligible for separate bulletins using the 3C Bulletin process without any additional testing.

## **Changing the number of CPUs:**

- If the system configuration changes from a Dual-Core to a Quad-Core CPU, complete the reduced test project to obtain a bulletin.
- If the system configuration changes from a Quad-Core to a Dual-Core CPU, complete the reduced test project to obtain a new bulletin.
- If the system configuration changes from one CPU to 2 or more CPUs, complete the reduced test project to obtain a new bulletin.
- If the system configuration changes from 2 or more CPUs to one CPU, complete the reduced test project to obtain a new bulletin.
- If the system configuration changes from a Dual-Core to a single core CPU, complete the reduced test project to obtain a bulletin.
- If the system configuration changes from a single core to a Dual-Core CPU, complete the reduced test project to obtain a new bulletin.

## **SCSI vs. RAID:**

If the host bus adapter supports SCSI and RAID, the system must first be certified with a full test project using either a SCSI or RAID configuration. If the host bus adapter supports RAID, but was only tested in a SCSI configuration, the bulletin will have a configuration note indicating the system was only certified in a SCSI configuration. To remove the configuration note, complete a reduced test project with the system configured in RAID. The opposite also applies if the system was only tested in RAID.

# **SLES to SLED Certification Policy**

Last Modified August 28, 2007

The SLES to SLED Certification policy applies only to the configurations covered by the Hardware Component Exchange Guide.

1. To qualify for a reduced SLED Certification from a SLES Certification, first successfully perform a SLES full Server certification test project on the system.
2. Once you have received a bulletin on this system, you are allowed to use a SLED reduced workstation certification project and perform the tests in that project on the system.

# Bulletin Release

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Once you have completed a certification, the test results must be uploaded to the Novell Bulletin System (NBS).

1. The vendor must upload the completed and passing test results to NBS.
2. The vendor will review and submit the submission to a REVIEW state.
3. Novell will generally validate the submission and submit the submission to a FINAL CUSTOMER REVIEW or a NEEDS RESPONSE state within 6 working days.
4. If the submission is moved to a NEEDS RESPONSE state, the vendor must add additional information to the submission and re-submit the submission back to Novell. Once we have all the need information and valid test results, the submission is pushed to a FINAL CUSTOMER REVIEW state. At this point the vendor will review the submission and can submit it for RELEASE or send it back to a REVIEW state for corrections.
5. Once the submission is in a FINAL CUSTOMER REVIEW state and ready for release, the vendor may release the submission at anytime.
6. The Bulletin will be posted to the Novell web site within 2 hours.

# Product Description Policy

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The product description field on a YES CERTIFIED bulletin is a way to include additional information about your product that is important. It may contain a marketing statement from the company as to what features are included in the product. The statement must apply to the product documented in the bulletin. Product description must be in English and may not exceed 1,000 characters. Do not make claims that are difficult or impossible to substantiate, especially over time.

Example:

1. Do not use phrases like “this is the best...”, “fastest...”, etc.)
2. Do not make statements about product lines or product series. It must be specific to the product tested and the configuration listed in the specific bulletin.
3. Do not compare your product to a competitor’s product or with other products on the market.
4. If a component category is not listed on the bulletin in the tested configuration area, but was part of the tested configuration, it may be included in the product description (sound adapters, firewire/1394 adapters, etc.).
5. Do not indicate optional adapter/driver configurations. A separate bulletin is required for the adapter / driver pair.
6. Do not list alternate processor family, unless test results are submitted for these alternate processors.
7. If alternate configurations of components are available and desired on a bulletin (video, drives, keyboards, etc.), then a separate bulletin must be created. If it is desired to list a “variety of options” (hard drives, optical drives, etc. are available), then each must have a separate bulletin.

# Products.txt

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Novell requires the most current products.txt file be used in certification testing. Download the latest products.zip, which contains the most current PRODUCTS.TXT file. The file is located under **Products.txt** you can update at the following URL:  
[http://developer.novell.com/wiki/index.php/System\\_Test\\_Tools\\_for\\_NetWare\\_and\\_SUSE\\_LINUX](http://developer.novell.com/wiki/index.php/System_Test_Tools_for_NetWare_and_SUSE_LINUX)

Follow the instructions on the URL page on how to install the products.txt file.

# OES Equivalent Operating Systems

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## Open Enterprise Server 2 (OES2)

The Open Enterprise Server 2 is SUSE® LINUX Enterprise Server 10 with Service Pack 1 (SLES 10 SP1) and NetWare 6.5 SP7 with a collection of additional Novell packages has been determined that these additional packages provide no additional risk to third party hardware product's compatibility, therefore any product that has been certified with SLES 10 SP1 or NetWare 6.5 SP7 will list OES2 on its bulletins.

Products that have been certified with OES 2 (Linux kernel) or OES 2 (NetWare kernel) will receive SLES 10 SP1 for the Linux Kernel or NetWare 6.5 SP7 for the NetWare Kernel on their bulletins with no additional testing.

Products that support EM64T processors may be certified with SLES 10 SP1 for:

- “SUSE® LINUX Enterprise Server 10 for x86”
- “SUSE® LINUX Enterprise Server 10 for AMD64® & Intel® EM64T®”

## Open Enterprise Server GA (OES)

The Open Enterprise Server GA SP2 is SUSE® LINUX Enterprise Server 9 with Service Pack 3 (SLES 9 SP3) and NetWare 6.5 SP6 with a collection of additional packages has been determined that these additional packages provide no additional risk to third party hardware product's compatibility, therefore any product that has been certified with SLES 9 SP3 and NetWare 6.5 SP6 will list OES SP2 on its bulletins.

Products that have been certified with OES GA SP2 (Linux kernel) or OES SP2 (NetWare kernel) will receive SLES 9 SP3 for the Linux Kernel or NetWare 6.5 SP6 for the NetWare Kernel on their bulletins with no additional testing.

Products that support EM64T processors may be certified with SLES 9 SP3 for:

- “SUSE® LINUX Enterprise Server 9 for x86”

# NetWare Driver Testing Policies

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These policies only apply to the NetWare tests in this kit. The Linux policy will be for all drivers to be tested for the time being in order to be listed on the system bulletin. Components can still be tested on their own, but there is not a sufficient enough database to draw from at this time of certified drivers. We will move to this policy for Linux testing as well as soon as is practical.

## LAN and HBA Embedded Chipset Testing

Each LAN driver on Network Server bulletins must have passed LAN certification tests in the LAN Test Kit.

Each Storage driver on Network Server bulletins must have passed Storage certification tests in the Storage Test Kit.

The term “chipset” also includes adapters. The system vendor performing self-testing for certification may display a driver / chipset pair on their Network Server bulletin by doing one of the following:

- Choose a certified driver/chipset pair from the list of YES Tested and Approved driver/chipsets in the Systems Certification kit.
- Select a certified driver and use it with a chipset that is designed for that driver.

Any chipset that does not pass the Network Server tests will not be allowed on the bulletin.

## Integrated Device Controllers

Many of the newer server class systems have multiple integrated device controllers. SCSI and RAID device controllers integrated on the system motherboard require the following:

1. All integrated HBA controllers must be configured and used during server testing and using the storage devices connected to these controllers.
2. Use all controllers during all testing.
3. Each embedded LAN adapter must be used during testing.

# Submission File Security

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The submission file generated by TestConsole contains compression/security features that prevent and detect tampering with the file. The technology used is able to detect if the file was opened in an attempt to edit the file's contents. Should the file be modified, it will fail the file security test at Novell during file read-in to the Novell database. In the event Novell receives a file that fails the security test, we will work with the submitting entity to rectify the issue. The submitting party will be placed on administrative probation. During the probation period receipt of any additional files that fail the security test at Novell may result in immediate cancellation of their authorization to perform Novell testing, cancellation of the contract between Novell and the submitting party or both.

# Remote KVM and/or Remote Management Products

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Testing must cover all of the product's supported configurations. Test both local and remote access to the server for the supported configurations. Go through all of the buttons on the product to make sure they are functional. Also test the following:

1. Upon boot up of the different configurations, verify they access setup (F1 or F2).
2. Enter the debugger from NetWare's GUI. Press Alt, Esc to get to the server console screen. Press Alt, Shift, Shift, Esc to get into the debugger. Type R <Enter> to list the registers and then type G <Enter> to get back to the server's console screen. At this point they would have been in 2 modes of the video (GUI and text) which will suffice for video.
3. Down the server and bring it back up from the remote workstation. Type down at the remote console, make sure it goes down gracefully and then type server and make sure it comes back up.

# NATC Cluster Testing

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Novell Authorized Test Centers (NATCs) must receive approval from Novell Developer Services Systems Group management to perform Novell Cluster Services certifications. Clustering Solutions are unique in that they present not only unprecedented opportunity for sales, they also provide unique customer support issues not typically seen with other Novell YES CERTIFIED products. In keeping with our goal of minimizing customer support costs Novell Inc. Developer Services reserves the right for final approval of any cluster server or solution testing performed by an NATC.

In order for the partner to receive a bulletin they must submit the cluster solution configuration for prior approval to the appropriate Novell Developer Services contact. The partner must also sell and support all of the components contained in the solution.

# Novell Cluster Services Bulletins

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Novell Clustering Services (NCS) is a new type of product from Novell that requires extending the current PartnerNet for Technology Partners YES CERTIFIED bulletin paradigm. The current paradigm requires that each component in the server configuration, for which there is a YES CERTIFIED program, pass compatibility testing. The server with its YES CERTIFIED components must pass the PartnerNet for Technology Partners System Test Kit compatibility tests to receive a YES CERTIFIED server bulletin. For example, a file server must pass network server testing using Network Interface Cards (NIC) that have passed the PartnerNet for Technology Partners LAN tests and received bulletins.

NCS requires a new type of bulletin: Novell Clustering Solution bulletin. With NCS, servers are now a component of the solution, like a NIC is a component in a server. Accordingly, servers in a Novell Clustering Solution bulletin must pass server compatibility tests and receive a bulletin. Then, the certified servers may be used as part of the test configuration to create a Novell Clustering Solution, which must pass the PartnerNet for Technology Partners NCS compatibility tests.

# Third-party File Submission Process for Novell Products and Support Packs

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This section outlines the process for third parties to provide NetWare compatible files to Novell for shipment with Novell products or Consolidated Support Pack (CSPs). Novell Inc. relies on third parties to submit their files using the process outlined below to provide customers with the latest supported and available third-party files.

## Contacts

The third party must be a member of the PartnerNet for Technology Partners program. Developer Services is the organization in Novell that manages the third-party file submissions. The entry point to Novell for all file submissions is through the third-party's engineering contact in Developer Services. Developer Services contact escalation line:

- Developer Services engineer(s)
- Developer Relations Manager (will coordinate and drive escalation)
- Developer Services manager.
- Developer Services representative to the product core team.

Novell requests that the third party provide no greater than two persons to submit files to Novell, (e.g., one person for new operating systems and one for support packs). Novell requests that the third party provide back up contacts.

## File Baseline

Prior to shipment of the first public beta, Developer Services will alert third-parties of a new Novell product or a CSP that will include the third-parties' files (e.g., drivers), and Developer Services will publish to third parties a projected schedule of file submission due dates for beta builds. Developer Services will use the third-party files for the first build of any new product or CSP from the most recently released similar product or support pack.

Previously submitted and validated files will not be removed from new Novell products builds until one of the following occurs:

- A new version of the same files has passed the "Yes Tested and Approved" test kit, validated by the Novell assigned engineer and the third party has requested the new version be included in the new product.
- The third party requests in writing that the files be removed.
- The files will not pass certification tests (e.g., requirements may change due to nature of new OS or CSP).
- The files have been found to have issues significantly impacting the product in a negative way.

## **Interim Builds**

New or replacement files for a new Novell product or a CSP do not need to be certified until Developer Services specifies the certification requirements (e.g., see the next step), but the third party must make every effort to provide stable files.

Developer Services will determine the new Novell product certification requirements for the third-party files, including the beta build on which the certification testing may take place. Developer Services will make test kits and due dates available to third parties when the beta build schedule becomes available.

Developer Services will make available to the third parties a weekly update of the deadlines for submitting files in new product or CSP builds. Developer Services requires 5 working days to deliver the files to the appropriate Novell product teams. The dates reflected on the master schedule document include the 5 day buffer.

New or replacement files for a new Novell product or CSP must be certified prior to FCS. The designated contacts at the third party will deliver to their Developer Services contact on or before the designated deadline a .zip file that contains new or updated drivers as well as the YES Certification test results. The third party must also send a written request to their Developer Services contact indicating the operating system or Support Pack that the files should go in. The third party may request their drivers be moved to the “unsupported” directory. The third party must also deliver to Developer Services all third-party files that their files depend on and indicate which directory each file should be in.

Developer Services will review the test results. Upon successfully completing the tests Developer Services will process the summary and push it to Final Customer Review. If the submission has been rejected, the third party and Developer Services will evaluate and confirm the reason for the rejection. Once this is resolved the third party will submit new files.

The third party will notify Developer Services in writing if they desire their files to be removed from Novell products or CSP, or moved to “unsupported” directories. The third party must specify in writing which directories their files go in. If the third-party files, with passing test results and written request are received before deadlines, Novell will include the third-party files in the next build.

## **File Validation**

Developer Services will periodically deliver beta builds and file lists to the third-party partners. Premier PartnerNet for Technology Partners will receive at a minimum weekly builds (as long as they pass validation), Advantage partners will receive at a minimum public beta builds.

After receiving a beta build, the third party is responsible for validating that their files are correct, in the correct directories, and functioning as designed, regardless of when, how or by whom the files were delivered.

The third party will notify Developer Services in writing of erroneous files prior to file submission due dates. If errors have occurred, Developer Services will make every effort to submit the appropriate files to product builds. However, Developer Services does not set the deadlines for file submission and can not guarantee that files submitted after due dates, regardless of their certification status, will be put into to the build. If the file is put in the build, Developer Services will provide to the third party a beta build to validate the error has been corrected. The third party will notify Developer Services whether the files have been corrected or not.

If Novell or the third party experiences third-party files that cause problems, Novell may revert back to latest stable build of third-party files or completely remove the files. Before the change is made, Developer Services will notify the third party of the change and the reasons for the change. Developer Services will work with the third party to correct the problem. If Novell finds the problem, Novell will document the problem in their bug tracking database and forward the problem description to the third party. If the third party finds the problem, they will document it in their bug tracking database and forward the problem description to Novell.

### **First Customer Ship (FCS) of new Novell product**

The third party will deliver to Developer Services passing certification test results for each file prior to FCS file submission deadline of the new Novell product.

The third party will review and approve the test summary.

After the third party has approved the test summary, Developer Services will issue a bulletin when the new product ships. The bulletin is based on the test summary that the third party has approved.

The third-party files not having a passing certification test summary will be removed from FCS of the new product or CSP by the file submission due date for FCS.