Enigma NMS – Reconciliation of Vendor Maintenance Contracts

In Enigma NMS Version 90.0.0, we have developed a very powerful new feature:
Reconciliation of Vendor Maintenance Contracts.

Currently it is enabled only for Maintenance Contacts provided by Cisco Systems.

Network Managers quite often have a challenge to track the Vendor Maintenance Contracts for their Live Production Equipment.

Generally the Enterprise Networking Infrastructure consists of assets of different criticality, ranging from Core Switches, Routers, Firewalls located in Data Centres which may cost hundreds of thousands of dollars, to the low cost switches and routers etc.

The high cost networking assets should be covered by the relevant vendor Maintenance Contacts, in Cisco Systems terms, SmartNet Contracts, which are necessary but quite expensive.

On the other hand the Access Switches or Routers and other equipment of low cost assets can be covered by the “Internal Spares” contract, which enables cost effective hardware replacement model.

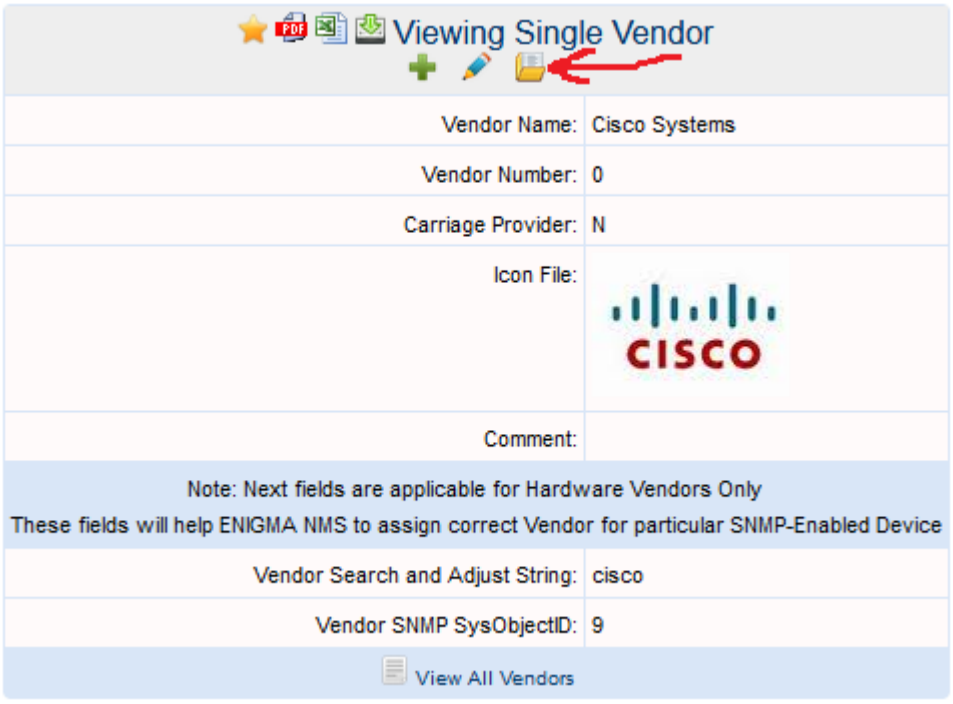
In theory all Network Production Assets should be covered by either “Internal Spares” or the relevant vendor Maintenance Contract to ensure the timely replacement of faulty hardware components.

Enigma NMS has built-in Spares Manager, which allows you to record all your Internal Spares, Sign them In or Off, Alert and Report on low stock items etc.

The “Modules Report” helps you to make intelligent estimation of the required stock items for the “Internal Spares” Maintenance Contract.

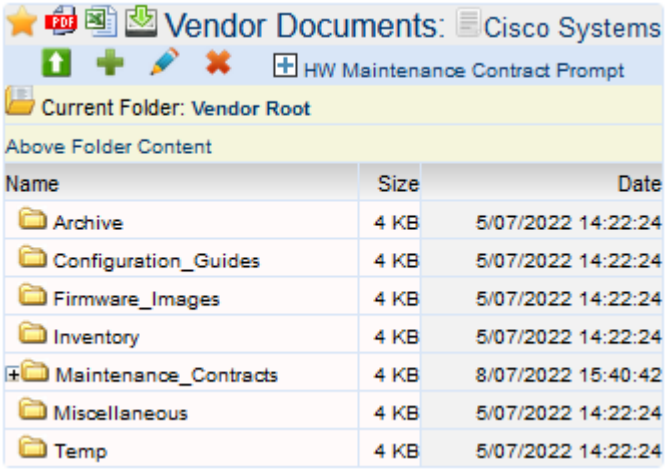
Following are the steps required to enable reconciliation of your Live Production Equipment with Maintenance Contacts provided by the relevant vendor:

1. **Download the Hardware Maintenance Contract “CSV” file from the Cisco Web Site.**
   You should have a valid login into the Cisco Systems Web Site, which will let you to locate the Maintenance Contract “CSV” file, relevant for your organization. Please download it and save it onto your PC.
   Please note that this “CSV” file has special format which consists of exactly 26 columns.
   It lists the Serial Number of the covered equipment, model number, along with End of Life and other Model related fields, Contract Number, Name and Expiry Date, Warranty Type and Expiry date.
   Also Cisco Systems Maintenance Contracts can be linked to the individual Modules, which make up the Hardware Composition of the relevant hardware node.
   Enigma NMS has the full inventory of all Hardware Assets including the detailed information about the individual modules, e.g. Switching or Routing Engine blade, Power Supply, Fan Module, SFP etc.
   Enigma uses this information to link the Serial Number (Key) listed in the “CSV” file with particular Hardware Assets.
2. **Go to:**
   Main Menu → “FOR MANAGERS” → Vendors
   Locate the Cisco Systems Vendor and click on its name, You will see the web page similar to the following:

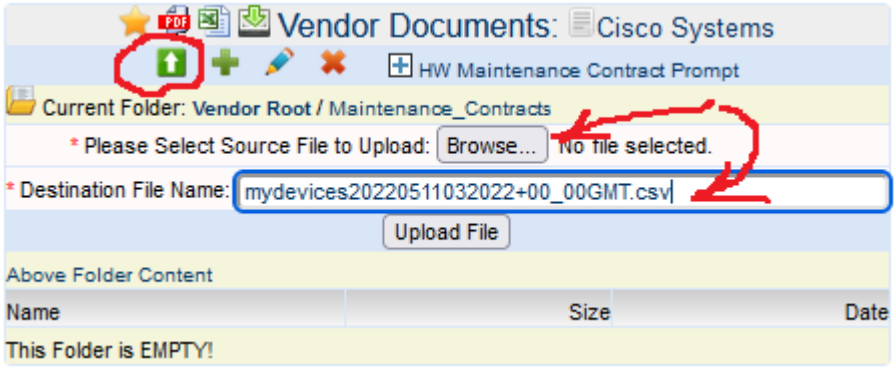


Click on the “Folders” icon.

3. **You will see the Documents Repository for Cisco Systems as below:**

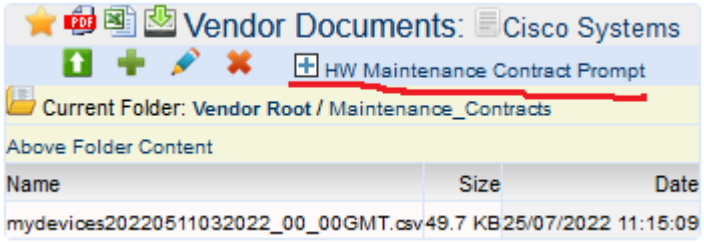


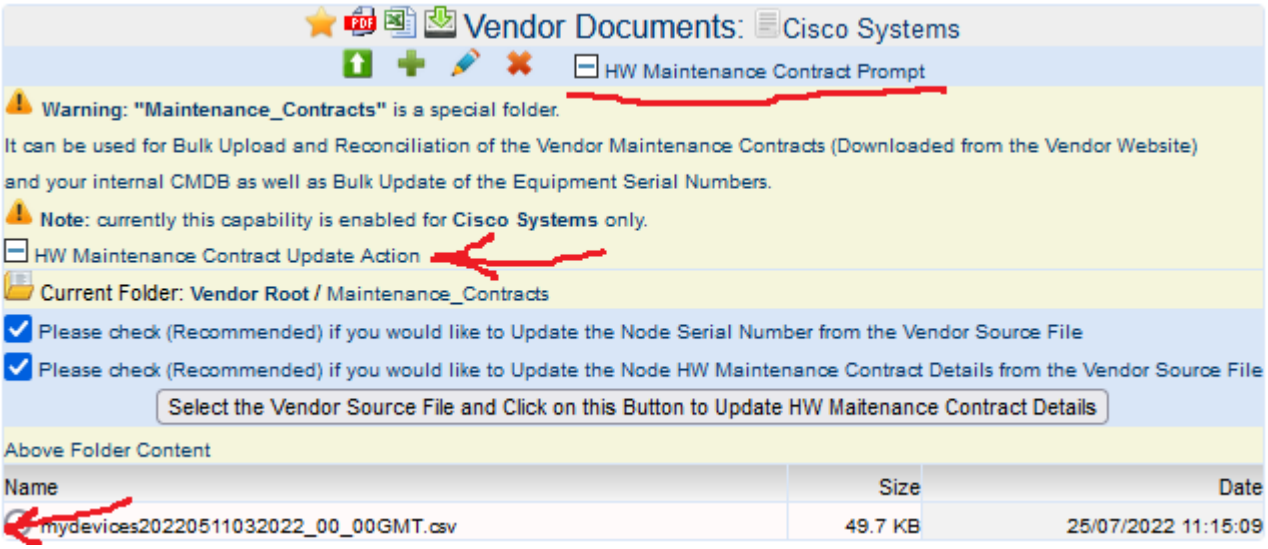
Click on the folder “Maintenance_Contracts”, this folder has a special meaning.
This is where you will need to upload the “CSV” filed saved from the Cisco Systems Web Site.



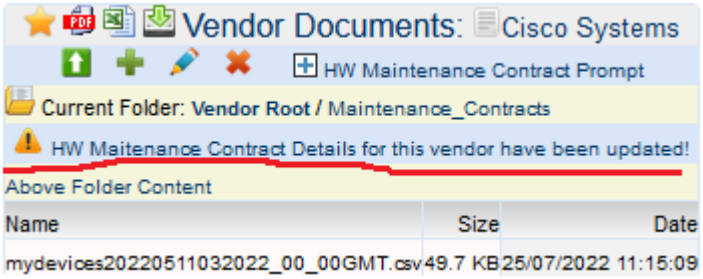
Click on the Upload button, click on Browse button, find your “CSV” file and paste its name into the “Destination File Name” field and click “Upload File” button.

4. **Click on the “HW Maintenance Prompt” link.**





Click on the “HW Maintenance Contract Update Action”.
When page reloads, tick both checkboxes and tick the radio button, near the file name.
Click on the button to update the HW Maintenance Contracts Details.

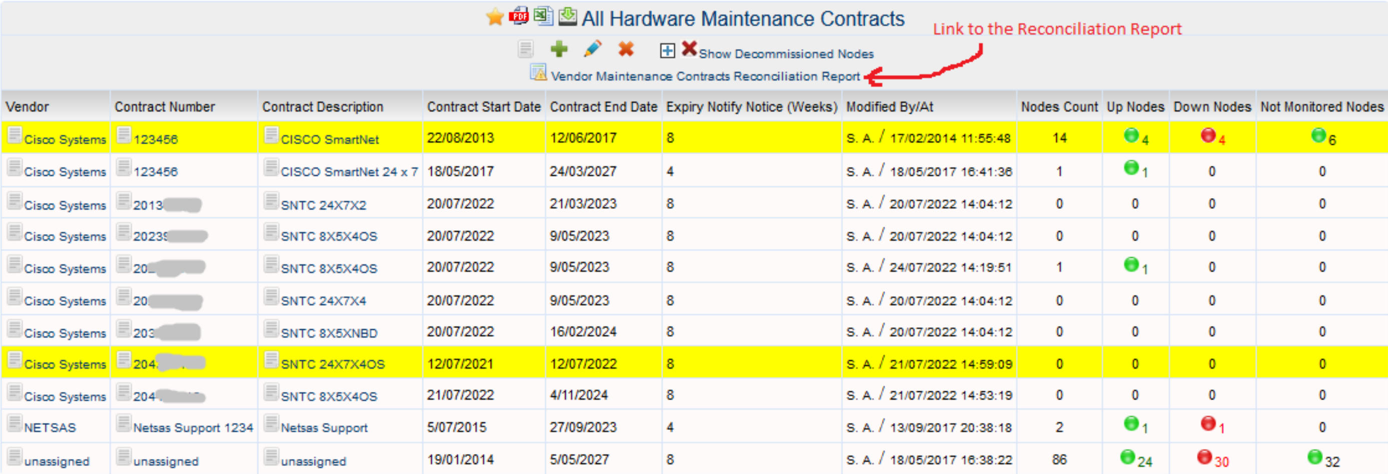


When you have clicked the button to update vendor HW Maintenance Contracts, following things have happened:

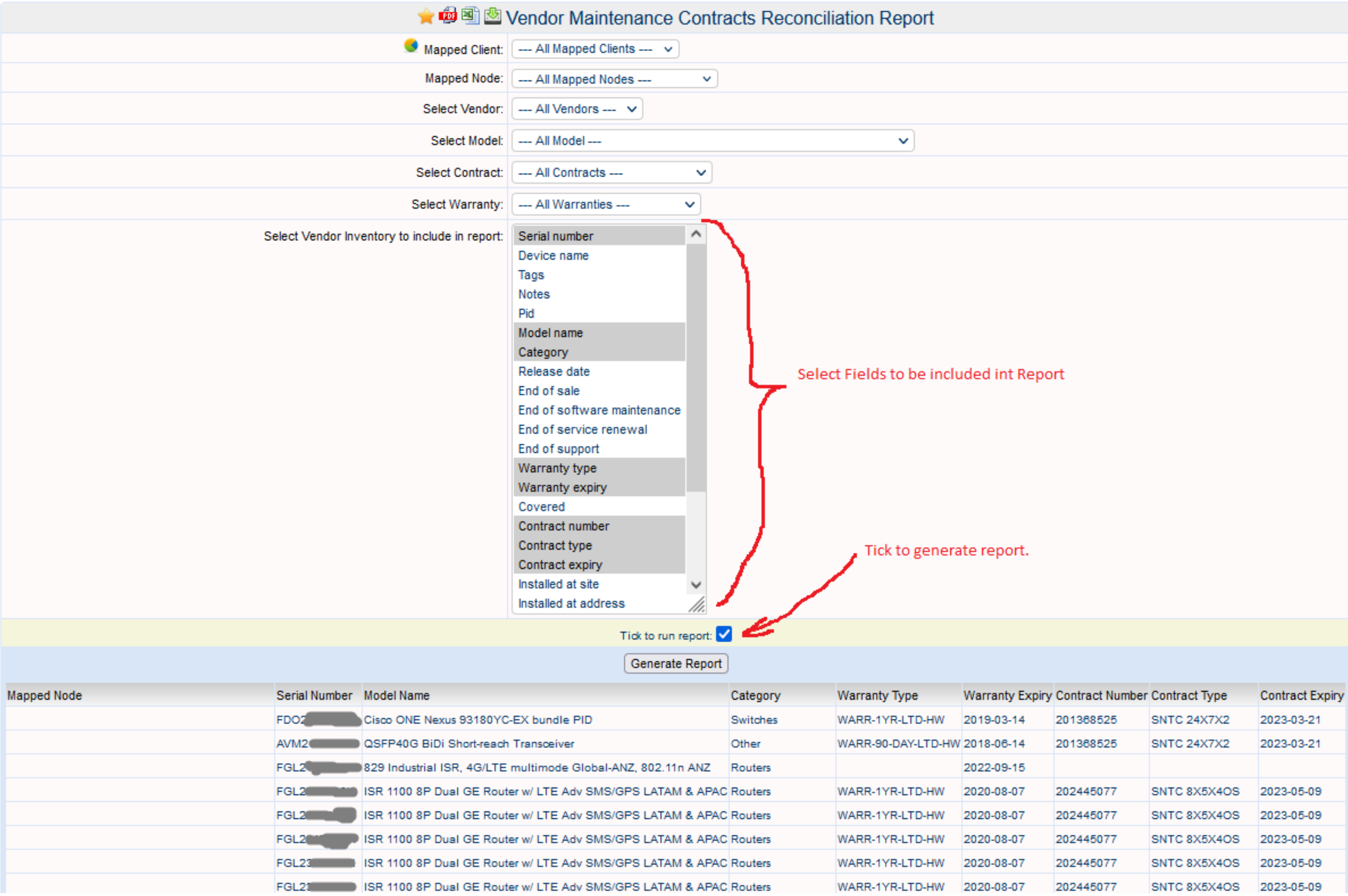
1. The content of this file has been uploaded into Enigma Database.
2. Relevant Model, Warranty and Contract records have been created.
3. All Date/Time records were normalized, i.e. converted into the “Epoch” format.
4. The Serial Number from this “CSV” file were mapped to the Live Production Data and hardware composition records for all relevant nodes were updated with references to the models, warranties and contracts.
5. Models “End of Life”, ”End of Support” and other relevant fields were updated.
6. Node Serial Numbers including the one which is modified manually were updated.
7. Node Warranty Details including the Expiry Date were updated.
8. Node Maintenance Contracts details were updated.

After the above actions, you can now review all Cisco Maintenance Contracts Details, via:

Main Menu → “FOR MANAGHERS” → Maintenance Contracts:



Vendor	Contract Number	Contract Description	Contract Start Date	Contract End Date	Expiry Notify Notice (Weeks)	Modified By/At	Nodes Count	Up Nodes	Down Nodes	Not Monitored Nodes
Cisco Systems	123456	CISCO SmartNet	22/08/2013	12/06/2017	8	S. A. / 17/02/2014 11:55:48	14	4	4	6
Cisco Systems	123456	CISCO SmartNet 24 x 7	18/05/2017	24/03/2027	4	S. A. / 18/05/2017 16:41:36	1	1	0	0
Cisco Systems	2013[redacted]	SNTC 24X7X2	20/07/2022	21/03/2023	8	S. A. / 20/07/2022 14:04:12	0	0	0	0
Cisco Systems	2023[redacted]	SNTC 8X5X4OS	20/07/2022	9/05/2023	8	S. A. / 20/07/2022 14:04:12	0	0	0	0
Cisco Systems	20[redacted]	SNTC 8X5X4OS	20/07/2022	9/05/2023	8	S. A. / 24/07/2022 14:19:51	1	1	0	0
Cisco Systems	20[redacted]	SNTC 24X7X4	20/07/2022	9/05/2023	8	S. A. / 20/07/2022 14:04:12	0	0	0	0
Cisco Systems	203[redacted]	SNTC 8X5XNBD	20/07/2022	16/02/2024	8	S. A. / 20/07/2022 14:04:12	0	0	0	0
Cisco Systems	204[redacted]	SNTC 24X7X4OS	12/07/2021	12/07/2022	8	S. A. / 21/07/2022 14:59:09	0	0	0	0
Cisco Systems	204[redacted]	SNTC 8X5X4OS	21/07/2022	4/11/2024	8	S. A. / 21/07/2022 14:53:19	0	0	0	0
NETSAS	Netsas Support 1234	Netsas Support	5/07/2015	27/09/2023	4	S. A. / 13/09/2017 20:38:18	2	1	1	0
unassigned	unassigned	unassigned	19/01/2014	5/05/2027	8	S. A. / 18/05/2017 16:38:22	86	24	30	32



Mapped Node	Serial Number	Model Name	Category	Warranty Type	Warranty Expiry	Contract Number	Contract Type	Contract Expiry
	FDO2[redacted]	Cisco ONE Nexus 93180YC-EX bundle PID	Switches	WARR-1YR-LTD-HW	2019-03-14	201368525	SNTC 24X7X2	2023-03-21
	AVM2[redacted]	QSFP40G BiDi Short-reach Transceiver	Other	WARR-90-DAY-LTD-HW	2018-06-14	201368525	SNTC 24X7X2	2023-03-21
	FGL2[redacted]	829 Industrial ISR, 4G/LTE multimode Global-ANZ, 802.11n ANZ	Routers		2022-09-15			
	FGL2[redacted]	ISR 1100 8P Dual GE Router w/ LTE Adv SMS/GPS LATAM & APAC	Routers	WARR-1YR-LTD-HW	2020-08-07	202445077	SNTC 8X5X4OS	2023-05-09
	FGL2[redacted]	ISR 1100 8P Dual GE Router w/ LTE Adv SMS/GPS LATAM & APAC	Routers	WARR-1YR-LTD-HW	2020-08-07	202445077	SNTC 8X5X4OS	2023-05-09
	FGL2[redacted]	ISR 1100 8P Dual GE Router w/ LTE Adv SMS/GPS LATAM & APAC	Routers	WARR-1YR-LTD-HW	2020-08-07	202445077	SNTC 8X5X4OS	2023-05-09
	FGL23[redacted]	ISR 1100 8P Dual GE Router w/ LTE Adv SMS/GPS LATAM & APAC	Routers	WARR-1YR-LTD-HW	2020-08-07	202445077	SNTC 8X5X4OS	2023-05-09
	FGL2[redacted]	ISR 1100 8P Dual GE Router w/ LTE Adv SMS/GPS LATAM & APAC	Routers	WARR-1YR-LTD-HW	2020-08-07	202445077	SNTC 8X5X4OS	2023-05-09

These vendor maintenance contracts have been cross referenced with the hardware composition modules, which in turn have been updated where it was required.

This data also is visible in the Node View and also included now into the Network Inventory Report, where you can have all you Live Production Data reported and cross references with Vendor Maintenance Contracts and Warranty Data. Please see below example:

Node View:

Installed Modules

Description	Name	Model	SN	Mnt Contract #	Mnt Contract Dsc	Warranty	Warranty Expiry	Manufacturer	FRU
1-port 10 Gigabit Ethernet Shared Port Adapter XFP based	SPA subslot 0/0	SPA-1X10GE-L-V2	SAL1942R6TF				1/01/1970 10:00:00	CISCO	Yes
1-port 10 Gigabit Ethernet Shared Port Adapter XFP based	SPA subslot 0/1	SPA-1X10GE-L-V2	SAL1942R6P9				1/01/1970 10:00:00	CISCO	Yes
1-port 10 Gigabit Ethernet Shared Port Adapter XFP based	SPA subslot 0/2	SPA-1X10GE-L-V2	SAL1942R6LN				1/01/1970 10:00:00	CISCO	Yes
1-port 10 Gigabit Ethernet Shared Port Adapter XFP based	SPA subslot 0/3	SPA-1X10GE-L-V2	SAL1942R6RS				1/01/1970 10:00:00	CISCO	Yes
1-port 10 Gigabit Ethernet Shared Port Adapter XFP based	SPA subslot 1/0	SPA-1X10GE-L-V2	SAL1940QHAZ				1/01/1970 10:00:00	CISCO	Yes
1-port 10 Gigabit Ethernet Shared Port Adapter XFP based	SPA subslot 1/1	SPA-1X10GE-L-V2	SAL1940QH1Y				1/01/1970 10:00:00	CISCO	Yes
1-port 10 Gigabit Ethernet Shared Port Adapter XFP based	SPA subslot 1/2	SPA-1X10GE-L-V2	SAL1942R6SJ				1/01/1970 10:00:00	CISCO	Yes
1-port 10 Gigabit Ethernet Shared Port Adapter XFP based	SPA subslot 1/3	SPA-1X10GE-L-V2	SAL1942R6SK				1/01/1970 10:00:00	CISCO	Yes
1-port 10 Gigabit Ethernet Shared Port Adapter XFP based	SPA subslot 2/0	SPA-1X10GE-L-V2	SAL1942R6NP				1/01/1970 10:00:00	CISCO	Yes
1-port 10 Gigabit Ethernet Shared Port Adapter XFP based	SPA subslot 2/1	SPA-1X10GE-L-V2	SAL1942R6VN				1/01/1970 10:00:00	CISCO	Yes
1-port 10 Gigabit Ethernet Shared Port Adapter XFP based	SPA subslot 2/2	SPA-1X10GE-L-V2	SAL1942R6JC				1/01/1970 10:00:00	CISCO	Yes
1-port 10 Gigabit Ethernet Shared Port Adapter XFP based	SPA subslot 2/3	SPA-1X10GE-L-V2	SAL1942R6QU				1/01/1970 10:00:00	CISCO	Yes
Cisco ASR1000 Embedded Services Processor, 100G	module F0	ASR1000-ESP100	JAE19400G5G				1/01/1970 10:00:00	Cisco Systems Inc	Yes
Cisco ASR1000 Route Processor 2	module R0	ASR1000-RP2	JAE19390AK7				1/01/1970 10:00:00	Cisco Systems Inc	Yes
Cisco ASR1000 SPA Interface Processor 40	module 0	ASR1000-SIP40	JAE1940085U				1/01/1970 10:00:00	Cisco Systems Inc	Yes
Cisco ASR1000 SPA Interface Processor 40	module 1	ASR1000-SIP40	JAE1940085L				1/01/1970 10:00:00	Cisco Systems Inc	Yes
Cisco ASR1000 SPA Interface Processor 40	module 2	ASR1000-SIP40	JAE19400854				1/01/1970 10:00:00	Cisco Systems Inc	Yes
Cisco ASR1006 Chassis	Chassis	ASR1006	FGL[redacted]	20[redacted]	SNTC 8X5X4OS	WARR-1YR-LTD-HW	7/08/2020 00:00:00	Cisco Systems Inc	Yes
Cisco ASR1013 AC Power Supply	Power Supply Module 0	ASR1013/06-PWR-AC	QCS19361B1L				1/01/1970 10:00:00	Cisco Systems Inc	Yes
Cisco ASR1013 AC Power Supply	Power Supply Module 1	ASR1013/06-PWR-AC	QCS19361B20				1/01/1970 10:00:00	Cisco Systems Inc	Yes
OC192 + 10GBASE-L	subslot 0/0 transceiver 0	XFP-10GLR-OC192SR	ECN00000634				1/01/1970 10:00:00	OEM	Yes
OC192 + 10GBASE-L	subslot 0/1 transceiver 0	XFP-10GLR-OC192SR	JOHNL9Z8989				1/01/1970 10:00:00	AGILESTAR	Yes
OC192 + 10GBASE-L	subslot 0/2 transceiver 0	XFP-10GLR-OC192SR	JOHNL9W8969				1/01/1970 10:00:00	AGILESTAR	Yes
OC192 + 10GBASE-L	subslot 0/3 transceiver 0	XFP-10GLR-OC192SR	XF96L0013				1/01/1970 10:00:00	OEM	Yes
OC192 + 10GBASE-L	subslot 1/0 transceiver 0	XFP-10GLR-OC192SR	JOHNL9Z8968				1/01/1970 10:00:00	AGILESTAR	Yes
OC192 + 10GBASE-L	subslot 1/1 transceiver 0	XFP-10GLR-OC192SR	JOHNL9Z8975				1/01/1970 10:00:00	AGILESTAR	Yes
OC192 + 10GBASE-L	subslot 1/2 transceiver 0	XFP-10GLR-OC192SR	JOHNL9W8962				1/01/1970 10:00:00	AGILESTAR	Yes
OC192 + 10GBASE-L	subslot 1/3 transceiver 0	XFP-10GLR-OC192SR	JOHNL9Z8967				1/01/1970 10:00:00	AGILESTAR	Yes
OC192 + 10GBASE-L	subslot 2/0 transceiver 0	XFP-10GLR-OC192SR	SPC15170F0F				1/01/1970 10:00:00	CISCO-SUMITOMO	Yes
OC192 + 10GBASE-L	subslot 2/1 transceiver 0	XFP-10GLR-OC192SR	JOHNL9W8961				1/01/1970 10:00:00	AGILESTAR	Yes
OC192 + 10GBASE-L	subslot 2/2 transceiver 0	XFP-10GLR-OC192SR	JOHNL9W8975				1/01/1970 10:00:00	AGILESTAR	Yes
OC192 + 10GBASE-L	subslot 2/3 transceiver 0	XFP-10GLR-OC192SR	JOHNL9Z8961				1/01/1970 10:00:00	AGILESTAR	Yes

Network Inventory Report snippet:

syd-gls-har-bras38.tpgi.com.au	192.168.4.38	Cisco Systems, 202445077, SNTC 8X5X4OS	WARR-1YR-LTD-HW, Cisco - WARR-1YR-LTD-HW	ciscoASR1006

Description	Name	Model	SN	Mnt Contract #	Mnt Contract Dsc	Warranty	Warranty Expiry	Manufacturer
Cisco ASR1006 Chassis	Chassis	ASR1006	FGL[redacted]	202[redacted]	SNTC 8X5X4OS	WARR-1YR-LTD-HW	7/08/2020 00:00:00	Cisco Systems Inc
Cisco ASR1013 AC Power Supply	Power Supply Module 0	ASR1013/06-PWR-AC	QCS19361B1L				1/01/1970 10:00:00	Cisco Systems Inc
Cisco ASR1000 SPA Interface Processor 40	module 0	ASR1000-SIP40	JAE1940085U				1/01/1970 10:00:00	Cisco Systems Inc
1-port 10 Gigabit Ethernet Shared Port Adapter XFP based	SPA subslot 0/0	SPA-1X10GE-L-V2	SAL1942R6TF				1/01/1970 10:00:00	CISCO
OC192 + 10GBASE-L	subslot 0/0 transceiver 0	XFP-10GLR-OC192SR	ECN00000634				1/01/1970 10:00:00	OEM
1-port 10 Gigabit Ethernet Shared Port Adapter XFP based	SPA subslot 0/1	SPA-1X10GE-L-V2	SAL1942R6P9				1/01/1970 10:00:00	CISCO
OC192 + 10GBASE-L	subslot 0/1 transceiver 0	XFP-10GLR-OC192SR	JOHNL9Z8989				1/01/1970 10:00:00	AGILESTAR
1-port 10 Gigabit Ethernet Shared Port Adapter XFP based	SPA subslot 0/2	SPA-1X10GE-L-V2	SAL1942R6LN				1/01/1970 10:00:00	CISCO
OC192 + 10GBASE-L	subslot 0/2 transceiver 0	XFP-10GLR-OC192SR	JOHNL9W8969				1/01/1970 10:00:00	AGILESTAR
1-port 10 Gigabit Ethernet Shared Port Adapter XFP based	SPA subslot 0/3	SPA-1X10GE-L-V2	SAL1942R6RS				1/01/1970 10:00:00	CISCO
OC192 + 10GBASE-L	subslot 0/3 transceiver 0	XFP-10GLR-OC192SR	XF96L0013				1/01/1970 10:00:00	OEM
Cisco ASR1000 SPA Interface Processor 40	module 1	ASR1000-SIP40	JAE1940085L				1/01/1970 10:00:00	Cisco Systems Inc
1-port 10 Gigabit Ethernet Shared Port Adapter XFP based	SPA subslot 1/0	SPA-1X10GE-L-V2	SAL1940QHAZ				1/01/1970 10:00:00	CISCO
OC192 + 10GBASE-L	subslot 1/0 transceiver 0	XFP-10GLR-OC192SR	JOHNL9Z8968				1/01/1970 10:00:00	AGILESTAR
1-port 10 Gigabit Ethernet Shared Port Adapter XFP based	SPA subslot 1/1	SPA-1X10GE-L-V2	SAL1940QH1Y				1/01/1970 10:00:00	CISCO
OC192 + 10GBASE-L	subslot 1/1 transceiver 0	XFP-10GLR-OC192SR	JOHNL9Z8975				1/01/1970 10:00:00	AGILESTAR
1-port 10 Gigabit Ethernet Shared Port Adapter XFP based	SPA subslot 1/2	SPA-1X10GE-L-V2	SAL1942R6SJ				1/01/1970 10:00:00	CISCO
OC192 + 10GBASE-L	subslot 1/2 transceiver 0	XFP-10GLR-OC192SR	JOHNL9W8962				1/01/1970 10:00:00	AGILESTAR
1-port 10 Gigabit Ethernet Shared Port Adapter XFP based	SPA subslot 1/3	SPA-1X10GE-L-V2	SAL1942R6SK				1/01/1970 10:00:00	CISCO
OC192 + 10GBASE-L	subslot 1/3 transceiver 0	XFP-10GLR-OC192SR	JOHNL9Z8967				1/01/1970 10:00:00	AGILESTAR
Cisco ASR1013 AC Power Supply	Power Supply Module 1	ASR1013/06-PWR-AC	QCS19361B20				1/01/1970 10:00:00	Cisco Systems Inc
Cisco ASR1000 SPA Interface Processor 40	module 2	ASR1000-SIP40	JAE19400854				1/01/1970 10:00:00	Cisco Systems Inc
1-port 10 Gigabit Ethernet Shared Port Adapter XFP based	SPA subslot 2/0	SPA-1X10GE-L-V2	SAL1942R6NP				1/01/1970 10:00:00	CISCO
OC192 + 10GBASE-L	subslot 2/0 transceiver 0	XFP-10GLR-OC192SR	SPC15170F0F				1/01/1970 10:00:00	CISCO-SUMITOMO
1-port 10 Gigabit Ethernet Shared Port Adapter XFP based	SPA subslot 2/1	SPA-1X10GE-L-V2	SAL1942R6VN				1/01/1970 10:00:00	CISCO
OC192 + 10GBASE-L	subslot 2/1 transceiver 0	XFP-10GLR-OC192SR	JOHNL9W8961				1/01/1970 10:00:00	AGILESTAR
1-port 10 Gigabit Ethernet Shared Port Adapter XFP based	SPA subslot 2/2	SPA-1X10GE-L-V2	SAL1942R6JC				1/01/1970 10:00:00	CISCO

Conclusion:

The developed functionality allows our clients instant access to the Vendor Maintenance Contracts data as well as run the Reconciliation Report with the Live Production Hardware.

You should be able to easily verify that all your Live Production Equipment is covered either by the relevant Vendor Maintenance Contract or “Internal Spares”.

Ensure that Maintenance Contracts records in your Enigma NMS are up to date and are linked with the relevant assets.

When there are less with 8 weeks left until the Maintenance Contact Expiry Date, Enigma will send you the notification email so you can review your Maintenance Contracts and renew if required.

The Warranty details are also up to date and correct.

Following are the recommended reconciliation criteria:

1. All your Core critical production equipment is covered by the relevant Maintenance Contract.
2. The current Vendor Maintenance Contracts do not contain the equipment which was decommissioned, i.e. you are not wasting your money.
3. Validate if you are able to save some budget by moving certain low cost equipment from being covered by the Vendor, which could be quite costly, to be covered by the “Internal Spares” maintenance contract.
4. Being able to quickly update Vendor Maintenance Contracts from the Vendor Web Site.

Further Enigma development plans include enabling similar functionality to other hardware vendors on as needed basis.