Oct. 27 2021 Boston VMUG UserCon

The future of USB/SD in the vSphere Data Center and Home Lab

TinkerTry IT @ home

Efficiency, virtualization, storage, backup and more

Paul Braren

TinkerTry.com/contact

vExpert 2014-2021
Veeam Vanguard 2015-2019
VCP # 2681 in 2005
Founder of TinkerTry.com, LLC
Advisory Solutions Engineer for New England, Enterprise at Dell Technologies

Today's presentation is available by 2:00 pm on Oct 27 2021 at:

bit.ly/bostonvmug2021

Also note that most images in this deck are hyperlinked to the original source.

Feedback always appreciated!

Public comments left below related TinkerTry.com articles are preferred.

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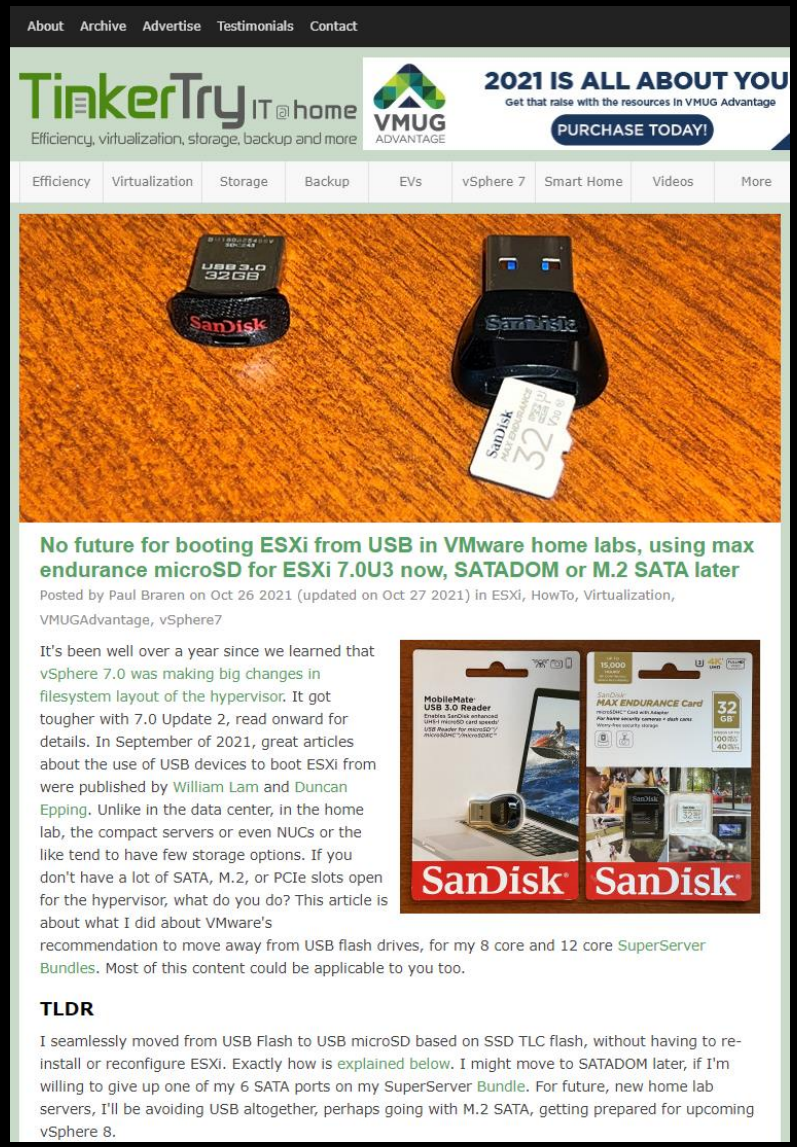
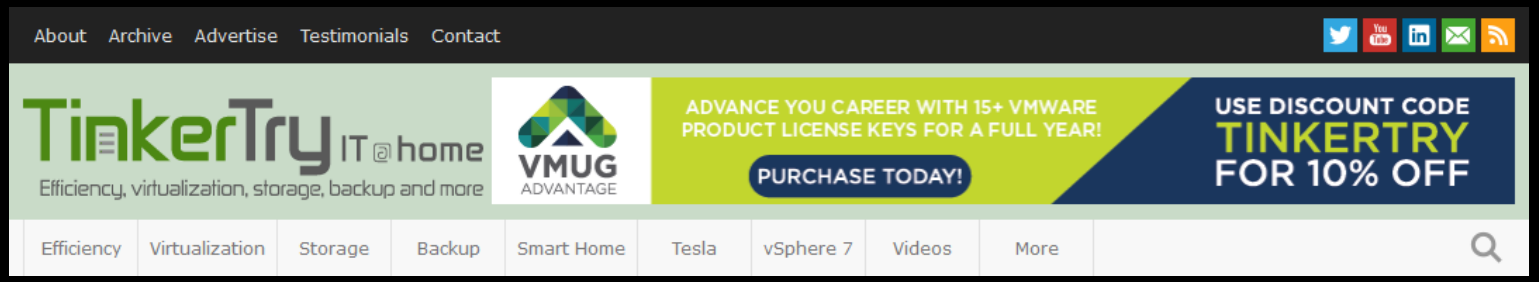
Disclaimer

My presentation today is not associated with my employer, my day job. I'm attending this VMUG today as content creator at TinkerTry.com. All major product releases have issues, this presentation focuses on helpful, constructive, positive stories of success in hopes of helping others smooth out the inevitable rough edges they'll experience too. After lab testing, I'm much more familiar with the VMware vSphere 7.0 Update 3 that my customers will be putting into production.

Outline

- Background
  - Everything I plan to talk about today, including this slide deck, is published at [No future for booting ESXi from USB in VMware home labs, using max endurance microSD for ESXi 7.0U3 now, SATADOM or M.2 SATA later]
- The rest of this deck is reference material





VMUG Advantage EVALExperience is another way, use discount code TINKERTRY to bring the $200 cost down 10%.

My portable datacenter is identical to what I run at home

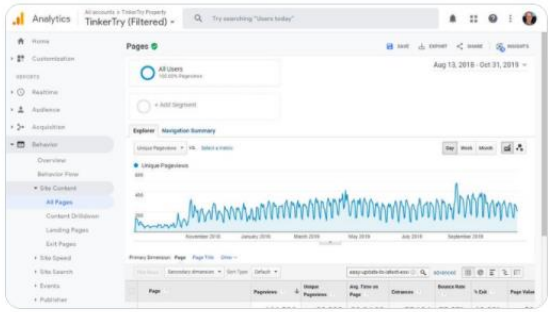
[The Xeon D Supermicro SuperServer "Bundle 2" of joy, a complete home datacenter virtualization solution that really flies]

My Home Lab Workbench

TinkerTry
TinkerTry.com

Even if you're back-level, don't worry, got your back!

Paul Braren | TinkerTry.com @paulbraren · Oct 31, 2019
Oh gosh, no problem, glad TinkerTry.com/easy-update-to... helped!
Just looked up the page stats, turns out it has passed 100,000 views, apparently there's a need, geez!
Notice the new @VMUGAdvantage ad atop TinkerTry?
I'm so thankful for their support, such a great match!



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VMUG Advantage @VMUGAdv · Nov 1, 2019
Congrats on 100,000 views! We appreciate your support for the @MyVMUG community and #VMUGAdvantage!

1 4

Paul Braren | TinkerTry.com
@paulbraren

Replying to @VMUGAdv @jdwallace and 2 others

Wow @VMUGAdv, what an awesome surprise to have such great swag waiting for me at the post office today, THANK YOU for your support of the #vCommunity! Happy to wear it proudly, and glad to distribute those pamphlets at any VMUGs I attend!
TinkerTry.com/vmug-advantage...
@MyVMUG #vExpert

9:33 PM · Nov 21, 2019 · Twitter Web App

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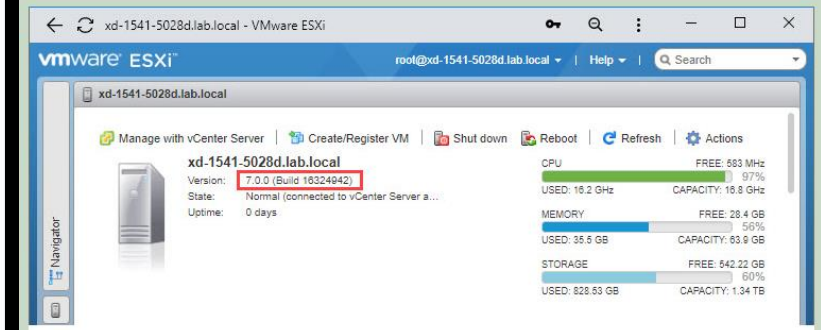

How to update any VMware ESXi Hypervisor to the latest using ESXCLI for easy download and install

Posted by Paul Braren on Aug 14 2018 (updated on Aug 17 2020) in ESXi, HowTo, HomeLab, Virtualization, vSphere7 78 Comments

The below list of one-liner SSH commands allow **all ESXi enthusiasts** to get to the very latest ESXi version (or any particular version) at any time. Seriously easy, much like `apt get` in Linux. Yes, even these folks:

- users of the **Free Hypervisor** (limited functionality)
- sysadmins for small labs with ESXi only and **no vCenter or VCSA**, thus, no VMware Update Manager (VUM), the preferred way to upgrade
- folks like me who have a VCSA appliance on the ESXi host we're trying to update but it won't let us proceed because we don't have DRS set to on for our small cluster (or single server)
- VMUG Advantage **EVALExperience Subscribers**, well worth every penny (full functionality, no need to rebuild, just re-up every year)

> VMUG Advantage gives me value end-to-end. I was able to use EVALExperience licenses to build my home lab, got discounts on both training and certification, and used my VMUG Advantage discount for VMworld (the only discount that stacks!). As long as I'm using VMware products, I'll be upgrading to VMUG Advantage.
>
> - VMUG Advantage Member

Let that sink in for a moment. It doesn't really matter that the Free Hypervisor and EVALExperience download sites aren't updated very often, you don't have to wait to get the latest version of the ESXi Hypervisor! For example, you can easily test the very latest Hypervisor-Specific Mitigations.

Warning!

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Demo Time!

1. VMware vSphere Client showing VCSA 7.0U3a and ESXi 7.0U3
2. Show M.2 NVMe SSDs & datastores
3. Compare with USB datastores
4. Windows 11 VM

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My work story

TinkerTry.com/about

My IT Career Timeline

Cornell University Help Desk

Mar 1993 - **Jul 1994** - Worked for free that first week, on the promise of reducing PC (DOS/Windows) help ticket backlog. Did some development as we rapidly got students online in those very early days of explosive internet growth.

MindShare Associates

Sep 1994 - **Oct 1997** - OS/2 Technical Consultant / Trainer
Got myself OS/2 Certified, earning myself a chance to train corporate resellers. I became the technical lead as we grew from 12 to 180 employees in a 6 month span, driving extensively because we couldn't afford to fly. Worked from 1995 to 1997 as a contractor at IBM Waltham Solution Partnership Center which became the IBM Innovation Center, training, and creating a new computing infrastructure and standing up all new datacenter equipment at a lovely customer-facing facility. Curator of the ThinkPad museum in the lobby too!

IBM

Oct 1997 - **Dec 2016** - World Wide Technical Team Lead of IBM ServerProven Program, helping build then run the customer datacenter. We helped customers speed up their application, and I helped automated the OS deployments for all those labs and classes. I then flew around for 5 years as a Lab Services Technical Consultant and Trainer, doing many rack-and-stacks and *VMware JumpStart!* deployment/trainings, deployed datacenter hardware and software in 35 of the 50 states in nearly all industry sectors, including Federal. My last 7 years at IBM as a Senior Storage Technical Advisor were focused on IBM XIV and FlashSystem Storage, performing and overseeing hundreds of successful installations of half-million dollar deployments. This role included customer risk-reduction through careful, proactive change management, along with emergency response management. yes, that meant I was on-call duty nearly 24x7, for 7 years!. I also did root-cause analysis after data available events. Gladly, of my dozens of customers, none experienced a data loss event.

I announced the end of my international adventures at IBM in my thank you article titled Thank you IBM, for 21 amazing years!.

VMware

Jan 2017 - **Jun 2019** - VMware Systems Engineer (vSAN)

While airborne, I proudly announced Today is my first day at VMware!. I went in with my eyes wide open, knowing full well that such a career pivot to a pre-sales role would be rather new to me, as it was not the sort of role I had been in since the early 1990s. My title was Systems Engineer, reporting to incredibly well-liked Peter Keilty. I got to witness the team double in size several times, an awesome rocket-ship ride trajectory was a very good thing for employees. I was one of only 4 hired in the Commercial sector, covering a massive patch, from Michigan to Maine to Virginia!

Aug 2018 - VMware Senior Systems Engineer (vSAN). This was a promotion, and a relief. Perhaps I can do this job after all!

Feb 2018 - VMware Senior Solutions Engineer (HCI)
Promotion! Paried with my Account Executive, we beat all sales objectives and then some, and received team awards. By the end of the year, our territory had shrunk to New England and Metro New York City, which is perfect for where I live in Central Connecticut, right between Boston and New York! Driving now more than flying, but still helping with booth duty at industry events too, which I quite enjoy.

Feb 2019 - Even more hiring, wow! This is sales, where change is to be expected.

Pivot3

Jun 2019 - Advisory Systems Engineer / vArchitect
Details at Just started my next adventure in infrastructure IT at Pivot3 as a Solutions Architect!

Dell Technologies

Oct 2019 - Advisory vArchitect
Details at Today is my first day at Dell Technologies as an Advisory vArchitect!

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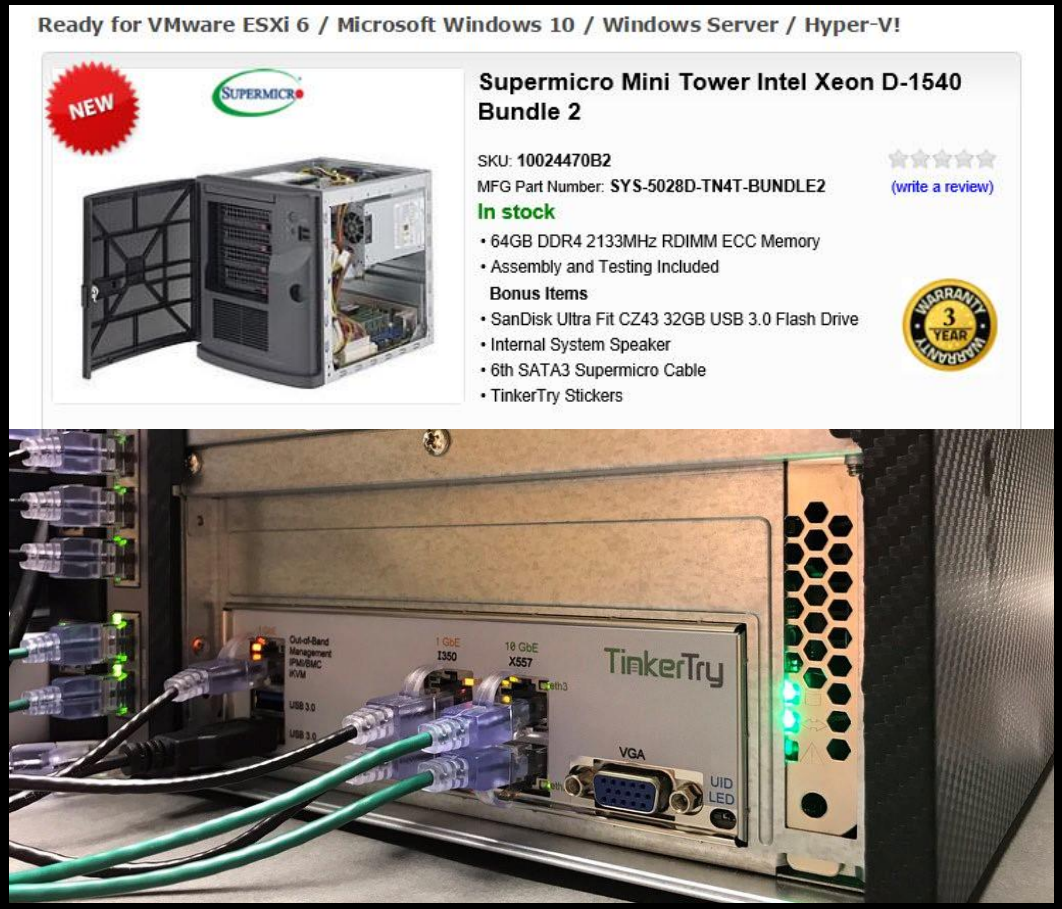
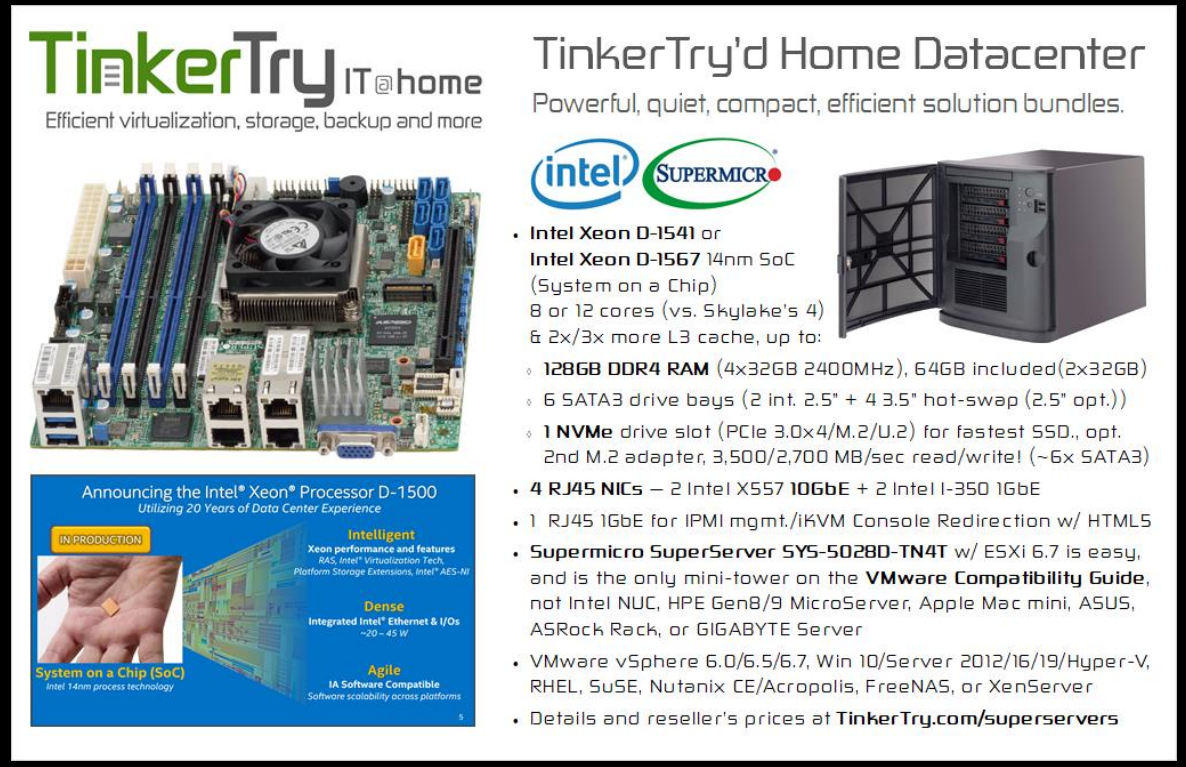
Twitter

[@paulbraren](https://twitter.com/paulbraren)

October 2015 – July of 2021

Well over 1,000 folks bought Bundles from Wiredzone, with less than a 0.5% return rate.





[TinkerTry'd Supermicro SuperServer Bundle - powerful and efficient home virtualization lab solutions]

Around back

- Two USB 3.0 ports

Support Challenges & Mythbusting

The VMUG Advantage EVALExperience and the VMware vExpert programs do not include any VMware vSphere support, and are intended for non-production workloads.

While Xeon D-1500 CPUs are on the VMware Compatibility Guide (VCG), VMware support goes by your system model, e.g. Supermicro SuperServer SYS-5028D-TN4T.

I paid ~$576 for vSphere Essentials, as I run some "production" VMs and I need to know what my readership experiences.

I paid $308 for Per Incident Support - vSphere Essentials.

I tried opening a ticket in mid-April, and failed to get an SR# assigned due to my system SYS-5028D-TN4T not being on the VCG for ESXi 7.0U1.

This has since been resolved, it's on the VCG for ESXi up through 7.0U3!

How do you do bug reports for complex issues when you can't even open a ticket?

In case you're interested

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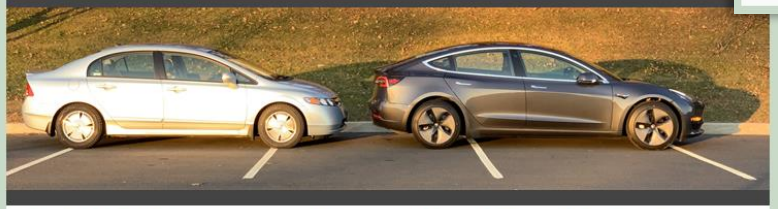
2006 Honda Civic Hybrid | 2018 Tesla Model 3 LR AWD



Tesla Model 3 replacing my 13 year old Honda Civic Hybrid, let's see how that goes. So far, so good!

Posted by Paul Braren on Dec 23 2018 (updated on May 12 2020) in Efficiency, IoT, Tesla 12 Comments

At the start of this video this video, Roadshow's Tim Stevens proclaims:

> What you're looking at is the most anticipated car of all time. With more than a half million pre-orders on the books, the Tesla Model 3 has piqued the interest of more people around the world than any car in history.

See also these lofty claims:

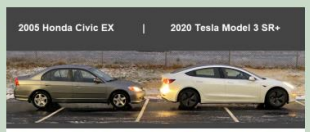
- **Tesla Model 3 = Most Efficient Electric Car On Highways**
  Aug 19 2018 by Dr. Maximilian Holland at CleanTechnica

  > New aggregated data from the gurus over at A Better Route Planner show that Tesla Model 3 efficiency is the highest of any production car at highway speeds, with

CleanTechnica
Exclusives | EV Reviews | EV News | Tesla News

Tesla Model 3 = Most Efficient Electric Car On Highways

First year and 25,000 miles of Tesla Model 3 ownership went very well, far exceeding our expectations
It's going well! So well that my wife and I carefully decided to do this last week: Tesla Tuesday for my wife, getting rid of our last gas car ever, a 2005 Honda Civic Dec 16 2019 We
Dec 23 2019 Read →



Tesla Tuesday for my wife, getting rid of our last gas car ever, a 2005 Honda Civic
Ready for departure! We both went for even more efficient cars than we already had, and let's be real, those Civics were more like 30 mpg and 25 mpg in the winter. Free Supercharging: If you find this article of value and decide to order a Tesla,
Dec 16 2019 4 Comments Read →

TeslaFi

TinkerTryd Model 3 LR AWD Is Idling
1 Hour 7 Minutes

Doors Locked

Charger Connected
90 / 90 %

Rated Range
274.89 Miles

Estimated Range
263.56 Miles

Inside Temp 56 F
Outside Temp 52 F

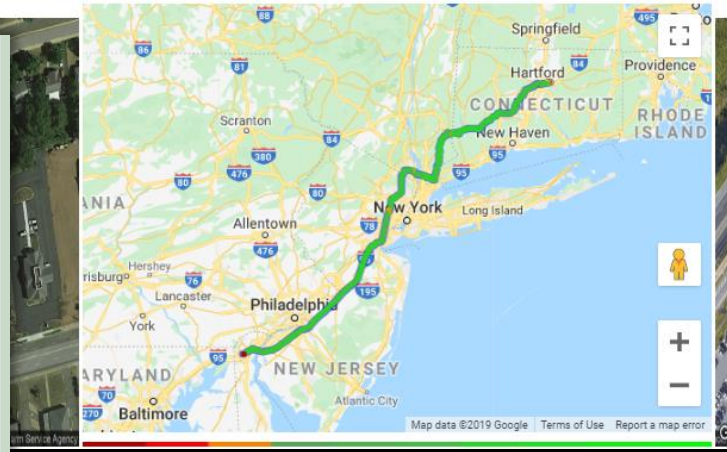
Odometer
24,780.52 Miles

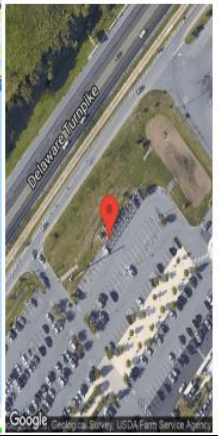
ings | Drives | Charges | Calendar | Controls | Fleet | Help | Logout

< Previous Drive | Next Drive >

Starting Address	Ending Address	Driving Time	Miles	Wh/Mile	Battery Usage	Cost	Elevation / Speed	Avg Temp	Drive 1147
307 Middle Turnpike West, Manchester, Connecticut 06042, United States	I295, Newark, Delaware 19713, United States	4 Hours 34 Minutes 12:08 PM-4:42 PM Data Accuracy 92%	273.44 Miles Driven 253.71 Rated Miles Used ODO 17,914.66 - 18,188.10	207 Wh/Mile 107.8% Efficiency	82% 56.54 kWh	Cost $ 10.18 Gas Savings $ 27.16 163 MPGe	-99.1 ft Avg Speed 62 MPH Max Speed MPH	Outside 85 F Inside 66.3 F Fan Avg 5	

Drive 1147





More videos

This first video gives you a tour of my garage's two overhead charging configurations, and the second video is a close look at the handy bracket and cable loop hangar.

TinkerTry YouTube Channel - Affordable and convenient way to get Tesla cables off garage floor, trip-free charging from above!

TinkerTry.com/EVs

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