

Legend for Additional file 3: Supplementary Video 1

Supplementary Video 1. Three-dimensional visualization of Infection 2 morphology presented in [Additional file 1. Supplementary Fig. S1](#). This video provides a volumetric rendering of the **Infection 2** filament shown in [Additional file 1. Supplementary Fig. S1](#), generated from a 21-tile super-resolution Airyscan Z-stack at 8 hours post-infection with cyanophage A-Lf14. DNA is pseudocoloured green (DAPI) and phycobilisome autofluorescence is pseudocoloured magenta, highlighting spatial host-phage interactions. The video highlights distinct infection scenarios present within this single filament, including: phages adsorbing to the filament surface, potential cell-to-cell spread, intracellular virion clusters, and a fully lysed cell.